GENDER DIFFERENCES IN PERCEPTION OF SENSE OF PLACE IN THE PUBLIC LANDSCAPE

by

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GENDER DIFFERENCES IN PERCEPTION OF SENSE OF PLACE IN THE PUBLIC LANDSCAPE

CHAPTER 1 INTRODUCTION & BACKGROUND

INTRODUCTION

Our society is in a constant web of change. As we, a community of designers, influence the environment, the environment influences the community at large. Society also shapes the environment and the designers.

It was the experience of this author in her introduction to the design fields, that the texts and readings were dominated by male authors. It was necessary to realize that a biased view had been presented with no disclaimer. Her discomfort was addressed only upon identification of this issue and the subsequent search for a feminine/feminist viewpoint, which was scarce in the field of landscape architecture. This study is a start in that direction.

A beginning step towards building an environment which supports women's lives, and development of sense of place, is to acknowledge the meanings of women's experiences. Women and men who accept differences and acknowledge similarities can help lead us to a community and an environment which is for the good of all.

STUDY DESCRIPTION

The focus of this study is whether or not gender, a culturally and socially defined phenomenon, influences people's perceptions of sense of place in public parklands. In this study gender differences in perception are examined. With the growing interest in women's issues there have been increasingly more studies which strive to quantify gender differences. These studies have covered physical, emotional and mental realms (Fauslo-Sterling, 1985; Gilligan, 1982; Lyons, 1983).

Using existing literature, a sense of place is defined by four aspects which are personal affect, identification, memorability and compatibility. Perceived safety is also included even though it is not included in the definition of sense of place by these authors. However, other authors consider safety an issue which needs to be included. Thus the concept of perceived safety did not appear in the sources used to develop the definition but was considered as a potential influencing factor.

Each of the above categories are subjective and dependent on how the observer perceives a particular space. Because of the subjectivity of human/space interactions, differences might be expected to be reflected in perceptions of sense of place. Individual differences can vary so greatly that a situation is created in which there is little consistency. Statistical relationships, if any, become random and unpredictable.

Groups can be formed through segregating factors such as gender, ethnicity, economic status or race. When the groups are based on some common factor, meaningful patterns of relationships can be detected. Gender is a potential group with meaningful differences and is the focus of this study.

In this study questionnaires were used to measure the subjective responses of observers to slides of public landscapes. Photographic surrogates have been found to be valuable in place assessment because they insure that subjects are responding to the same stimulus (Russell & Pratt, 1980). Public parks are especially suited for this study. They offer vegetated landforms that are a common everyday experience.

First, women and men are identified as two different user groups. Each group experiences and uses space differently. Past research has established gender differences in landscape preferences and in how women and men perceive such issues as crowding and safety (Holahan, 1978; Leach, Lesiuk & Morton, 1986; Macia, 1979).

How the environment is described, defined and valued also differs by gender. Many researchers and planners address women and men together as a single user group (Bacon, 1979; Kaplan, 1983; Norberg-Schulz, 1980; Reigner, 1978). When women are considered separately, it is often in relationship to perceptions of fear in the environment (Leach, Lesuik & Morton, 1986) or perceptions of the home environment (Fryer, 1986; Saegert, 1980).

Research addressing issues such as women in public environments or women in design is slowly surfacing. The available information is produced by a limited number of authors who have highly specialized areas of interest. The main body of work concerning women in urban parks is written by Galen Cranz (1978, 1980, 1981a, 1981b, 1982).

How users react/interact with the public landscape is an important issue for projects of all scales. Designing for a sense of place could possibly enhance positive reactions to a site. Addressing the perceptions of women and men, as different groups, will allow designers to respond better to the needs of the whole public when planning public use areas.

As environmental designers, we are often asked to design for, or encourage the development of, a sense of place in the environment. This study will examine how perceptions of the environment are influenced by gender and aid in defining the conceptual term sense of place. A designer's potential for encouraging a sense of place in the environment can be enhanced, first by defining women and men as two important user groups, and second by understanding how the environment is perceived by these different user groups.

GENDER DIFFERENCES IN PERCEPTION

Designers and builders modify the environment to meet society's needs, values and priorities (Lang, 1987). In western society, the accepted value system, societal construct and environmental organization are based on an androcentric, male-centered, framework (Kennedy, 1981; Sime, 1986; Weiler, 1988). To shape the future landscape it is crucial for designers to recognize a variety of user groups and to understand their interactions with the environment. The status of people in society is related to a number of factors, including gender, age, socio-economic class and ethnic background. When gender alone is studied, women are consistently found to have less status than men (Hunter College Women's Studies Collective, 1983). Women in western culture learn quickly that gender influences social expectations, realms of political influence and even use of the outdoor environment. Leslie Kanes Weisman (1981) interprets the political nature of design as environmental oppression towards women by "not providing the environments we [women] need to support our autonomy. The man-made environments which surround us reinforce conventional patriarchal definitions of women's role in society and spatially imprint those sexist messages on our daughters and sons" (p.6). The roles assigned to each gender are reinforced in everything from children's stories to park planning policies.

The importance of different aspects of the environment also varies by gender. When asked to describe environments, men often base their views on easily measured economic and material qualities (Nordstrom, 1985). When asked to describe the same environment, women focus on the social aspects of a setting. These social views are difficult to describe, and even more difficult to measure and analyze.

Scenic value scales break a landscape into visual components or feasibility judgments. These components are then quantified in a ranking system. Few, if any of these scenic value scales include as components the social aspects of a scene. For this reason, such scales may fail to accurately measure a woman's reaction to a scene in a way which she finds important.

These divergent perspectives of men and women do not fit well into a single decision-making process. The process is similar to comparing apples and oranges in a cost analysis perspective when what's really important is the experience of the shopping trip.

It seems that public parks have been and still are developed with an inappropriate decision making process. Standards of behavior are implied by the actual forms of parks and the processes through which they were designed (Weisman, 1981). The open-space system parks which have been advocated since 1965 were developed to make the "city safe and attractive to middle class women" (Cranz, 1980 p.S80). The problem was not viewed as the safety and attractiveness of the environment for women.

Instead, the mere presence of middle class women was supposed to aid in decreasing urban decay, riot and vandalism. Women were treated as a design element rather than active users of the parks. Whether or not women feel a sense of place, belonging or security appears to have been superfluous.

Society does not yet recognize that women have distinct urban needs (Cranz, 1980). Rather, society recognizes that women are in danger of rape and harassment when they venture out-of-doors. The result is that women live with self-imposed restrictions on their potential activities and sense of self in order to survive. They avoid situations which they perceive as fearful.

Here again, female users' perceptions and a male-oriented decision-making process are divergent. The official approach to promoting safety in the public landscape is to provide visual components such as night lighting, emergency phones and a clear line of sight. In fact, the assessment of an area as safe is more closely linked to social factors such as stereotypes of the people in the environment than to a physical environmental analysis (Reigner, 1978). Reigner's research does support the idea of park planners that the presence of women in a landscape promotes socially acceptable behaviors.

A study conducted by Leach, et al. (1986) was aimed at finding what aspects of the Carleton Campus in Ottowa, Canada promoted women's perceptions of fear in the urban environment. One of the resulting suggestions for improving the campus was to include a woman on the campus planning board. The team suggested that she have "a feminist planning perspective" and be "familiar with problems encountered by urban women" (p.12). None of the recommendations were implemented.

HISTORY OF PARK PLANNING

The following discussion of the history of park planning is largely based upon the works of Galen Cranz (1978, 1980, 1981a, 1981b, 1982). Cranz has divided parks into four categories for the convince of her work. The categories include the pleasure ground era, reform parks, the recreation era and the open-space system park. Cranz compares the types of parks being constructed with the political and social implications for women's behaviors and activities.

Urban parks were a nineteenth-century development to aid in curing the ills of a rapidly changing and industrialized America. The focus was, and is, on how parks can ameliorate society's problems. Park planning commissions, landscape architects and politicians define the problems and decide how the public landscape can encourage change behavior. Problems have ranged from industrial blight, immigrant integration, prostitution, alcohol, and male juvenile delinquency to suburban flight.

The pleasure ground (1850 - 1900) featured a picturesque landscape of rolling hills for visual and mental relief from the city. The park was a place to display proper etiquette and values for a community of many different nationalities. Picturesque refers to a style of the English landscape but also aptly describes the policy-makers role for women in the park.

During the pleasure ground era, the presence of women in a respectable setting with husband and children "would contribute to a family's sense of itself" (Cranz, 1980 p.S80). The focus was on the family's sense of self, not the individual's. Because women were/are viewed as the primary caretaker of the family, urban reform relied heavily on women's roles in public to set a proper example.

Ironically, photographs of New York's Central Park during this era display a different reality than that of artists and park planners. Rather than women tied to men in heterosexual bliss, the women are out together. Cranz (1980) interprets the photographs as women teaching and supporting each other. Women were the primary users of parks. The park planners of this era did, however, take pride in providing a place for women and girls to go out alone with their friends.

The reform parks (1900 - 1930) response to male juvenile delinquency was the supervised playground. Nearby benches were often marked "For women with children only." Spaces were divided according to gender and age with unequal allotments of acres and equipment.

The ballfields and gymnasiums of the recreation era (1930 - 1965) catered to competitive team sports which seem to be closely associated with the male socialization processes. The open-space system park (1965 - present) is perhaps more gender neutral than its predecessors in terms of specific use spaces and the implied roles of women.

An open-space system park is probably most likened to the pleasure ground. The actual form of the landscape has changed but the minimal demarcation of specific use spaces encourages a greater diversity of activities and users than the recreation or reform era parks. Once policy makers and park planners begin defining use areas, all of the overt social symbolisms and role expectations come along with it. With the open-space system park the symbolisms and expectations may be more associated with the type of users than the physical setting itself.

The specific form of a park changes with time and the resources available but the role of women as social stabilizers remains. Vocalized perceptions are based on how women contribute to the sense of family and society. Women then become a logo which exalts androcentric hegemony. How women perceive the place or themselves takes a back seat. From this position the view is oblique and the course unknown.

GENDER DIFFERENCES IN PERCEPTION OF SENSE OF PLACE IN THE PUBLIC LANDSCAPE

CHAPTER 2 LITERATURE REVIEW

DEFINITION OF LANDSCAPE

Researchers have found many ways to define landscape. To study how people perceive a landscape it is important to first define the phenomenon being perceived. One view from the many possible definitions must be selected to avoid confusion and to help focus the study.

Landscape may be defined as a phenomenon apart from people. This is the focus taken by J.B. Jackson as he defines landscape as a collection of lands (Penning-Rowsell & Lowenthal, 1986). John Lyle describes landscape as the "physical manifestation of an ecosystem" (1989).

Some view landscape as the result of human domination over scenery. Stilgoe contends that "landscape happens not by chance but by contrivance" (1982, p.3). Laurie supports a domination perspective by stating that land becomes landscape only when it is described or seen by humans (1975).

Landscape is also defined in terms of human/landscape interactions. Eckbo divides landscape into four dimensions: physical, economic, cultural and social (Zube, Brush & Fabos, 1975). Each dimension is a way in which humans interact with the landscape as either a focus, setting or background. When landscape is divided into land and scape, as J.B. Jackson suggests, an interactionist approach can be derived. A synonym for land, according to Merriam-Webster's Thesaurus (1976), is "earth" and for scape is "perspective". Then how one views landscape is also an earth-perspective; the ways in which one's perspective of the physical earth is influenced by the economic, cultural and social behaviors and values. Physical aspects, such as water, landform and vegetation, are assigned values and meanings based on a criteria system which is defined by the culture. The focus of this study is whether or not gender, a culturally and socially defined phenomenon, influences people's perceptions of sense of place in public park-lands.

PERCEPTION AND LANDSCAPE

Perception involves the sensory processes through which people gather information about the present environment (Holahan, 1982). Perception is an ongoing active process which is often taken for granted. According to the U.S. Forest Service (1973) eighty-seven percent of the visually-abled human's perceptions of the world are visual. As the planet's resources become scarce environmental awareness has increased. Included among the more quantitative resources, such as air and water, the visual resources are now being added (Bacon, 1979).

The perception of a landscape encompasses two basic areas for study. The first is understanding the visual components of a scene which include the physical elements of a scene as well as the composition of the elements. The second area of study is understanding how viewers interpret and interact with that scene. Interpretation of a scene includes symbolic meanings, personal preferences and personal goals. Social norms and situations can also influence how a landscape is perceived. The various aspects of visual perception require different research approaches, descriptive and predictive, respectively (Zube, 1982).

Descriptive evaluations of landscapes are based on an existing framework of rules and value judgments. Within the fine arts perspective, principles such as balance, variety and sequence have withstood the test of time and critical evaluation of artists and historians. More recently, an ecological perspective has used components such as edge and cover type to evaluate landscapes. The focus of descriptive inquiry is on the landscape, in and of itself. This approach is appreciated by planners and landscape architects because of the ease of application within their work. To justify decisions which influence many individuals, quantitative methods of landscape evaluation have been developed. Often these involve breaking a scene down into several landscape components for objective appraisal. The Bureau of Land Management _Visual Resource Management Program_ and the _Battelle Environmental Evaluation System_ are two such methods. These approaches require an expert to properly use the evaluation criteria. The experts are expected to divorce themselves from any subjective response to the scene. These methods are used to predict the response of the general public and to assign values to landscape components.

While specific landscape components may influence a person's appraisal, the method labeled as predictive by Zube (1982) is geared to understanding how people perceive a landscape. The focus is redirected from the landscape to people's interactions with and responses to the landscape. The landscape also takes on the additional dimension of meaning which is perceived, defined and expressed by non-expert viewers. Through describing and understanding how people perceive the landscape, the goal is to develop useful predictions of environmental perception and behavior. Being able to predict how people will respond to, or perceive, an environment can enhance a designer's potential for developing places which will be appealing to the future users of the place.

Psychological theories of information processing, arousal and adaptation level are used for testing research hypotheses and the development of methodologies. Sociology also supplies theories of proxemics, (Hall, 1966), territoriality and environmental symbolism. To apply these theories in landscape assessment research the person is no longer viewed as an observer but as interacting with the environment.

Personalities, values, and experience become important. Also important is the entire effect of the scene as well as perceived invitations to potential activities. This study attempts to measure a person's subjective reaction to a landscape.

AFFECTIVE APPRAISAL

The use of semantic scales to record affective appraisals of environments has been researched since 1956. In 1965 Nowlis presented work using the Mood Adjective Checklist. The English language has an overwhelming list of potential adjectives for describing the affective quality of environments. A pleasant quality can be verbalized as pleasant, nice, pleasing, pretty and beautiful. The semantic opposites include dissatisfying, displeasing, repulsive, unpleasant and uncomfortable. The affective quality of a place is defined as the "emotion-inducing quality that a person verbally attributes to that place" (Russell & Pratt, 1980, p.312).

To begin minimizing the lengthy list of potential descriptors, Russell and Pratt (1980) analyzed twenty-one adjectives. Their research supports the conceptualization of affect as two bipolar factors: pleasant-unpleasant and arousing-sleepy. The affective appraisal of an environment was reduced to eight variables: pleasant, unpleasant, alert, sleepy, relaxed, distressed, excited and gloomy. In 1981, Russell, Ward and Pratt analyzed one hundred and five adjective sets. Their results supported the previously defined factors of pleasant and arousing as good indicator scores of a person's affective appraisal.

Describing a person's mood in terms of the bipolar dimensions of pleasantness and arousing was again suggested in "Emotion and the Environment," _The Handbook of Environmental Psychology_, (Russell and Snodgrass, 1987, chap.8).

For the definition of sense of place in this study, the positive affective appraisal of an environment is an important component in perception. Some research suggests that the affective appraisal of an environment precedes cognitive, or evaluative, decisions made about an environment (Zajonc, 1980, 1984). Ittleson proposed that "the first level of response to the environment is affective. The direct emotional impact of the situation . . . very generally governs the directions taken by subsequent relations with the environment" (1973, p.16). These studies imply that if an environment is perceived positively on an affective level, more detailed evaluations would be used to either support or reject the initial appraisal. This allows the defining components of identification, memorability and compatibility to support the overall sense of place evaluation.

GENDER AND ENVIRONMENT

Studies which address gender differences and experiences of the physical environment have found a communication problem. Maria Nordstrom (1985) conducted cross-sectional studies which explored the perceptions of home for fifteen year old boys and girls and adult suburban homeowners. She found the perceptions of home as a material symbol for males and as a social environment for females to be consistent across the age groups. Expression of female views was a problem because their views were based in a social, cultural and value context which lacks a systematic means of communication and evaluation.

Lyons in a 1983 study found that the development of landscape preference is a cumulative process subject to differences in social and demographic characteristics. Variations in landscape preference were related to age, gender and residential experience. Gender differences became apparent at the ninth grade level. Females began preferring fewer of the landscape views than their male counterparts. Gender differences in preference were even more divergent as the subjects' age increased. Gender and personality differences have also been combined to study landscape preference. A. Macia (1979) developed a personality profile for individual subjects and then compared the profile with landscape preference ratings of slide surrogates. The relationship between personality profile and types of preference were found to differ according to an individual's gender. Of interest here is that when the results were tabulated all together, the findings matched neither those of the male or female segregated groups.

To test spatial abilities, Ward, Newcombe and Overton (1986) studied how gender influences the use of cardinal directions in dealing with the environment. Women used fewer cardinal directions than men when asked to give directions from a map visually available and from a map committed to memory. When prompted to use cardinal directions, women were as proficient in usage and accuracy as the men. According to the authors, the differences appear to be one of style rather than ability.

In their research, however, Ward et al. did not ask the men to avoid using cardinal direction when giving directions. By prompting the women to, but not inhibiting the men from, using cardinal directions the underlying assumption is that the male style preference is the norm. Perhaps the research would have shown a gender difference if the study population had been asked to give directions using only landmarks.

Women's ways of knowing have been described as emotional, direct, expressive, intuitive, immediate, subjective and relationship-centered (Belenky, Clinchy, Goldberger & Tarule, 1986; Gilligan, 1982). This does not mean that women cannot think in quantifiable ways, but rather women's socialization has reinforced certain ways of knowing which best achieve women's needs. Women's ways should not be lost in the development of new concepts and theories. The theories should evolve to meet the needs of women in a rapidly changing society.

Alternative solutions to design problems should be explored for responsive design. As Shirley Ardener points out in Defining Females: The Nature of Women in Society (1978), behavior and space are mutually dependent. According to The Hidden Dimension (Hall, 1966), proxemics (one's use of space) is a specialized elaboration of culture. People's vision of reality, and the situation at hand, influence their behaviors based on society's expectations. Myths and religious views are also used to promote hegemonic ideas and values. In Beyond God the Father, (1973) Mary Daly discusses how religions have been used to promote sex roles. "Woman's Place, Man's Place" (Loyd, 1975) is a satirical essay on how myths have been used to support the division of space along gender lines.

But, reality is subjective. A children's story, The Emperor and His Fine Clothes (cited in Millman & Kanter, 1975), is an excellent example. The emperor believed he wore a new suit of exquisite design and detail during his parade. All the town peasants yelled the appropriate phrases during the emperor's outing, except for one young child, who realized the emperor was naked. For the editors of Another Voice (Millman & Kanter, 1975; p.vii):

> "The story instructs us about one of our basic sociological premises: that reality is subjective, or rather, subject to social definition. The story also reminds us that collective delusions can be undone by introducing fresh perspectives.
>
> ... In the last decade no social movement has had a more startling or consequential impact on the way people see and act in the world than the women's movement. Like the onlookers in the Emperor's parade, we can see and plainly speak about things that have been there, but that formerly were unacknowledged."

SENSE OF PLACE

Sense of Place is a difficult concept to study because it is ill-defined. Two basic approaches commonly used in sense of place studies are the scientific and the humanistic. The scientific approach examines the components of human perception and cognition of space. These components include recognition, way-finding, and cognitive mapping (Carpman, 1985; Kaplan & Kaplan, 1978; Ward et. al. 1986). The humanistic approach focuses more on the aesthetic and emotional experience of space, as described in the thought-provoking prose of J.B. Jackson's "The Vernacular " (Penning-Rowsell & Lowenthal, 1986) and Gretel Ehrlich's The Solace of Open Spaces (1986).

Some types of studies are commonly used to study sense of place (Levy-Leboyer, 1982; Tuan, 1977). These include spatial analysis, psychological evaluation, historical scholarship, and descriptive prose. The format chosen depends upon the preferred approach to sense of place and to the academic field of allegiance. Of interest in sense of place research are perceptions of the individual, of communities, and of groups within the community. These perceptions may be influenced by the physical setting, experiential attributes, or by behavioral expectations and habits.

DEFINITION

To define sense of place, for the purposes of this research, the process began with scouring the literature for usages and definitions of the concept "sense of place." In general, a sense of place can be associated with pleasant and arousing feelings and experiences. There are many elusive qualities of a space which may contribute to perceiving a sense of place. People have defined sense of place in many different ways.

The definitions of sense of place range from Christopher Alexander's intriguing yet elusive "quality without a name" to David Canter's text, The Psychology of Place, which contains a myriad of scientific studies all under the heading of place. To arrive at a usable definition of sense of place, several authors were analyzed and compared. The sources and quotations are listed below. A **bold** highlight indicates key words or concepts.

Christopher Alexander
The Timeless Way of Building, 1979

"the quality without a name." p.ix

"It is the search for those moments and situations when we are most **alive.**" p.x

Kent Bloomer & Charles Moore

Body, Memory and Architecture, 1977

"Places must be **distinguishable** from the world around them." p.79

"...public **inhabitability...** people **feeling naturally at home.**" p.84

"**Memorability** Test. To at least some extent every real place can be remembered partly because it is **unique**, but partly because it has affected our bodies and generated enough **associations** to hold it in our personal worlds." p.107

David Canter

The Psychology of Place, 1977
"The Purposive Evaluation of Places," 1983

place: a) "what **behavior** is associated with, or it is **anticipated** will be housed in, a given locus. b) what the physical parameters of the setting are. c) the description, or **conception** which people hold of that **behavior** in that physical environment." 1977 p.159

"the degree to which a person sees a place as helping to achieve that person's goals at various **levels of interaction** with that place." 1983 p.659

Kevin Lynch

Image of the City, 1960
Good City Form, 1981

"a sense of **belonging** and **security.**" 1960 p.4

"Indirectly, sense is affected by the nature of **control** and by the **fit of form to behavior.**" 1981 p.150

Kevin Lynch & Gary Hack

Site Planning 3rd ed., 1985

"This can be described in terms of behavior settings or small localities, bounded in time and space, within which there is some stable **pattern of purposeful human behavior, interacting with some particular physical setting.**" p.34

"Places should have a clear perceptual **identity**: be **recognizable, memorable**, vivid, engaging of our attention." p.72

Christian Norberg-Schulz
Genius Loci, 1980

place equals "space plus **character.**" p.11

"Man [sic] dwells when he can **orient** himself within and **identify** himself with an environment, or, in short, when he experiences the environment as **meaningful.**" p.5

"The existential purpose of building is therefore to make a site become a place, that is to uncover the **meanings potentially present** in the environment." p.18

Harold Proschanksy, Abbe Fabian & Robert Kaminoff
"Place-Identity," 1983

"Place-**identity** is a substructure of the self-**identity.**" p.59

Edward Relph
Place and Placelessness, 1976
"The Instant Environment Machine and the Reclamation of a Place." 1985 (cited in Sime, 1986)

"a place is a piece of the whole environment that has been claimed by **feelings.**" p.142

"A place is a whole phenomenon, consisting of the three intertwined elements of a specific landscape with both built and natural elements, a **pattern** of social activities that should be **adapted** to the advantages or virtues of a particular location and a set of personal and shared **meanings.** 1985 (cited in Sime, 1986 p. 55)

Jonathan Sime
"Creating Places or Designing Spaces?," 1986

"Place...a physical location engenders a **positive, satisfactory experience.**" p.50

Yi-Fu Tuan
"Space and Place," 1974
Space and Place: The Perspective of Experience, 1977

"Place... a **unique** entity, a '**special ensemble**'; it has a history and **meaning**." 1974 p.213

"**Spatial dimensions** are keyed to the human sense of **adequacy**, **purpose** and **standing**." 1974 p.233

"'Space and place require each other for definition'. . . having **the power and enough room to act**." 1977 (cited in Fryer, 1986, p.49)

The key words and concepts fell naturally into four categories: personal affect, identification, memorability and compatibility. These categories were used to develop the definition of sense of place for this study. In the following pages, the authors' views are examined as they relate to the conceptual definition of sense of place.

The conceptual definition used in this thesis of sense of place is that a positive sense of place is associated with personal affect [feelings of pleasantness and arousal] when a place is experienced. Personal affect is influenced by the degree which a person sees that place as a) identifiable b) memorable and c) compatible with anticipated activities.

AUTHORS

In his book, Genius Loci (1980), Christian Norberg-Schulz gives his view of three cities with place. Norberg-Schulz views place as an artistic concept which cannot be scientifically studied, In his subjective analysis of Prague, Khartoum, and Rome, he describes the physical architectural features of the environment without reference to the people who live there.

In Norberg-Schulz's view architecture should be used to enhance "the meanings potentially present in the environment" (1980, p.18). Thus "meaning" is seen as an inherent part of the environment, rather than an attribute given by people. "Man [sic] dwells [in an environment] when he can orient himself within and identify himself with an environment, or, in short, when he experiences the environment as meaningful" (1980, p.5). Norberg-Schulz contributes the concept of identification to the definition of sense of place given above.

In Genius Loci, Norberg-Schulz explored similar concepts as those developed by Kevin Lynch in his 1960 book Image of the City. Lynch broke space into identifiable components to study how people perceive the city. He found that people perceived space as a set of nodes, landmarks, paths, edges and districts. This gives people a vocabulary for cognitive mapping and recall. According to Lynch, those places with a good environmental image lend a sense of emotional security and belonging. In his efforts to find quantifiable variables, he deemphasized the aesthetic experience of the city.

Lynch's text, Good City Form (1981) is a discussion of the theory behind city patterns. This differs from Alexander's A Pattern Language (1977), which is an explanation of the patterns used in spatial design. In his 1985 collaboration with Gary Hack, Lynch translated the broad concepts of his previous work into design criteria and construction details. In chapter 3, "The User," Site Planning, 3rd ed., the authors state that the goal of site planning is to provide places which provide habitation, a sense of place, an environmental fit with behavior and accessibility. Designed space is viewed as human habitat. This supports the definition of sense of place as depending upon compatibility of space with anticipated activities.

Christopher Alexander, in his book The Timeless Way of Building (1979), emphasizes the relationship between people and place. In this philosophical justification of his previous book, A Pattern Language (1977), he describes the quality without a name. According to Alexander, this quality of space allows one to feel alive, whole, comfortable, free, exact, egoless, and eternal. "It is the search for those moments and situations when we are most alive" (1979, p.x). He contributed the association of feelings of pleasantness and arousal with sense of place in the definition espoused in this thesis.

In Body, Memory and Architecture (1977), Bloomer and Moore give an added dimension to the common understanding of place. Rather than simply an area or locale, Bloomer and Moore define place as "distinguishable from the world around them" (1979, p.79). Bloomer and Moore developed a memorability test to define place. According to Body, Memory and Architecture, places are memorable not only because they are identifiable but also because they affect our bodies and emotions. To the definition of sense of place they have supported the components of identity and memorability.

While Bloomer and Moore personify place, developing an analogy to the human body, Proschanksy, Fabian and Kaminoff (1983) feel that the development of place-identity aids in defining the self-identity. While other authors see the relationship as somewhat passive, Proschanksy et al. feel that people actively analyze places along five parameters. This analysis determines how a place will enhance one's self-identity. The analysis parameters, used consciously or unconsciously, are recognition, meaning, expressive requirement, mediating change, and anxiety and defense.

Canter's text, The Psychology of Place (1977), is a discussion of research on place. From this review Canter was able to define place along three parameters. These were the physical setting, expected behavior and how well the two matched. In later work Canter expanded his definition to include the objective (referent) desired and the individual focus within the setting (1983). An example would be of two people in a shopping mall. They both have the same objective of window shopping but one person is looking at hammers while the other is looking at bicycles. The concepts of referent and focus suggest that social descriptors, such as age and gender, may influence people's perceptions and use of space.

In 1974 Yi-Fu Tuan published a discussion entitled "Space and Place: a Humanistic Perspective," in Progress in Geography. In this chapter Tuan examines the many meanings of space and place. According to Tuan, place means both one's position in society and one's location in space. This is one of the few overt recognitions in the literature that perceptions of space may be influenced by social descriptors.

Tuan asserts that "only human beings can have a sense of place. People demonstrate their sense of place when they apply their moral and aesthetic discernment to sites and locations" (1974, p.235). Thus, sense of place, rather than being an attribute of the space is more influenced by the person perceiving the place. Tuan's views reinforce the affective component of the definition of sense of place adopted.

Like Tuan, Edward Relph sees sense of place as unconscious, perceived only when threatened. In _Place and Placelessness_ (1976), Relph describes the continuum of insideness to outsideness. The concepts describe intensities of place experience.

Place develops as feelings are applied to space over time. Relph views place as identifiable, compatible with anticipated activities, and "invoking a set of personal and shared meanings" (cited in Sime, 1986, p.55). This closely agrees with the definition of sense of place promoted here.

SAFETY

The sense of place definition was derived from several sources, all written by men. This androcentric sampling of definition components lacked safety as a consideration in sense of place. The few sources in the literature that were written by women (Buttimer & Seamon, 1980; Kaplan, 1978, 1982) were found to be inappropriate for use in this research.

Intuitively, it seems that feelings of freedom from the threat of physical harm would favorably influence a person's response toward a park. It is this intuitive feeling that leads to the inclusion of safety as a variable on the questionnaire. The lack of references precluded it's inclusion in the definition of sense of place. The results of this study suggest that safety may be an important part of the definition of sense of place.

SUMMARY

The conceptual definition of sense of place used in this study consists of four components: personal affect, identity, memorability and compatibility with expected activities. Tuan and Alexander agree that affect is an important part of sense of place. Relph, Proschanksy, Bloomer and Moore, and Norberg-Schulz all found that a place must be identifiable to evoke a sense of place. Bloomer and Moore feel that memorability is important to how space is perceived. Compatibility with anticipated activities is an important part of the definitions used by Relph, Canter, Proschanksy, and Lynch.

Societal expectations define gender roles. Canter and Tuan, agreeing that societal expectations influence perceptions of space, have implied that gender would influence perceived sense of place. The purpose of this research is to find support for the gender implications of Canter's and Tuan's studies.

GENDER DIFFERENCES IN PERCEPTION OF SENSE OF PLACE IN THE PUBLIC LANDSCAPE

CHAPTER 3 METHODOLOGY

STUDY OBJECTIVE

The objective of this study is to examine the concept "sense of place" in the public landscape in a gender sensitive manner.

STUDY CONCEPT

The conceptual definition for sense of place is that:

> a positive sense of place is associated with personal affect [feelings of pleasantness and arousal] when a place is experienced. Personal affect is influenced by the degree which a person sees that place as a) identifiable, b) memorable and c) compatible with anticipated activities.

This definition is adapted from the sources cited in Chapter 2, Literature Review. Proof or refinement of the relationships implied in this definition are outside of the scope of this study. However, these relationships will be used as a basis of comparison of female, male and combined groups.

VARIABLE DEFINITIONS

This thesis examines the following variables:

Sense of Place

A sense of place can be associated with pleasant feelings and experiences. In addition to sense of place being a positive experience, there are many illusive qualities of a space which may contribute to perceiving a sense of place. People have defined sense of place in many different ways. Christopher Alexander has defined sense of place as "the quality without a name," (Alexander, 1979).

Gender

Gender is the socially imposed dichotomy of masculine and feminine roles and character traits. Sex is physiological, while gender is cultural (Hunter College Women's Studies Collective, 1983).

Personal Affect

Personal affect is the human feelings or emotions that people verbally attribute to a place. Places can be described with positive or negative feelings.

Identifiable

Identification is the combination of physical cues which people use to identify a place.

Memorable

Memorability is the ability of people to remember or recall a place from their past experience with that place. The memory could be positive or negative.

Compatible

Compatibility is the degree of match between a person's preferred activities and the anticipated activities in a place.

Perceived Safety

Safety is the freedom from threat of harm.

RESEARCH HYPOTHESIS

The research hypothesis for this study is that analysis will show a gender difference in each of the variable scores and the variable relationships for the following statements.

1) Personal affect will be positively related to sense of place.
2) Identifiability will be positively related to personal affect.
3) Memorability will be positively related to personal affect.
4) Compatibility will be positively related to personal affect.
5) Perceived safety will be positively related to personal affect.

PROCEDURES

Relationships between gender and perceived sense of place were evaluated using a color slide surrogate of three open-space system parks. One hundred and sixty voluntary participants completed a self-prediction response format questionnaire.

PARK SELECTION AND SLIDE SELECTION

Three open-space system parks were selected for the research. Selection of parks is limited to Kansas to minimize regional differences in preference. The test parks selected were City Park, Manhattan; Lost 80, Lansing; and Shawnee Mission, Kansas City. These parks were selected because of ease of reconnaissance, which was largely a function of proximity to Manhattan, Kansas.

A sequential series of twenty-five slides were selected for each test park. The series represents a movement through space scenario to assist in visualization and evaluation (Bosselmann and Craik, 1987). Figure 1 shows the visual sequence, sketched from slides, for Shawnee Mission, Park 3. Studies have reported congruence between direct experience and surrogate simulations with correlations in the +.70 to +.95 range (cited in Bosselmann and Craik, 1987 p.175). Photographic simulations are also valuable in place assessment because they insure that subjects are responding to the same stimulus (Russell & Pratt, 1980; Shuttleworth, 1980).

IMAGE 1

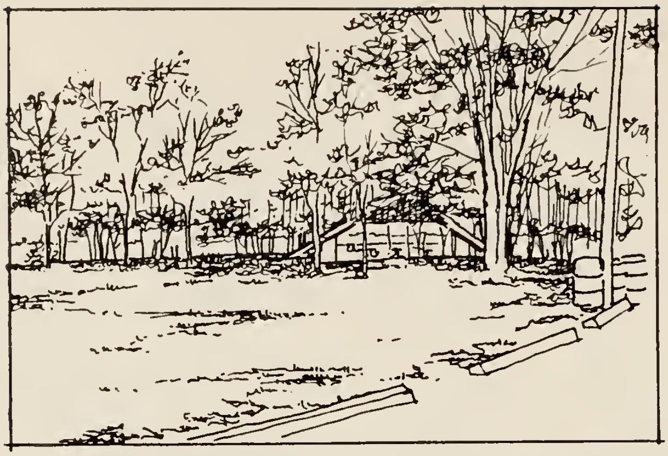


IMAGE 2

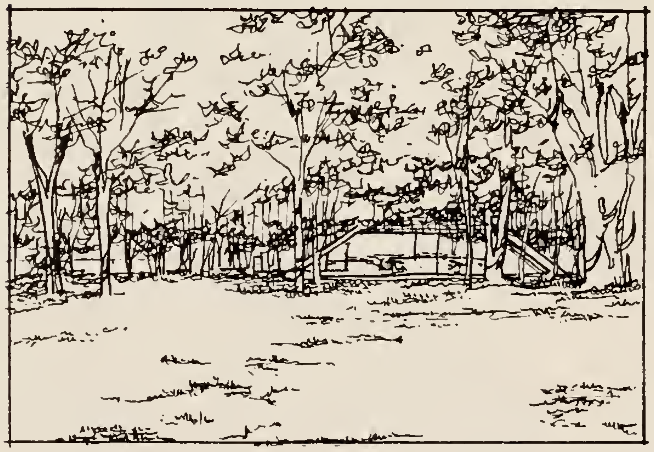


IMAGE 3

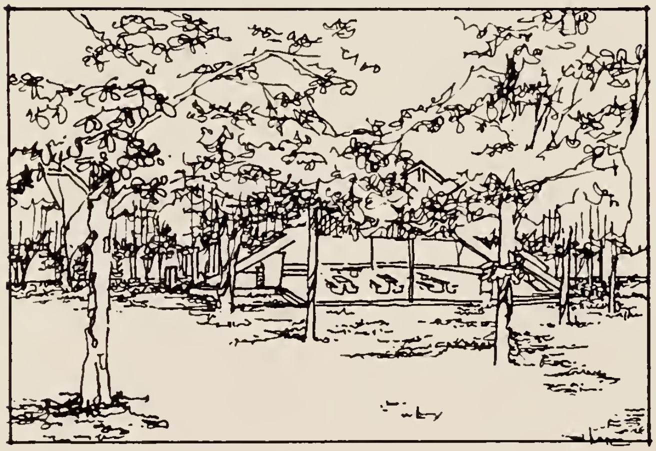


FIGURE 1 SLIDE SURROGATE SERIES
-SHAWNEE MISSION, PARK 3: Sketches by Author

IMAGE 4

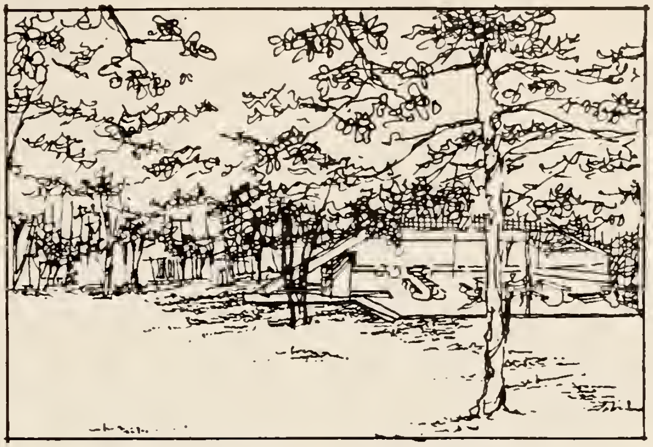


IMAGE 5

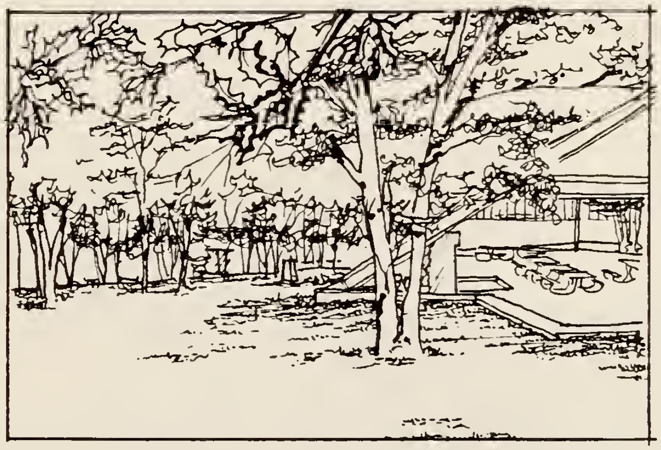


IMAGE 6

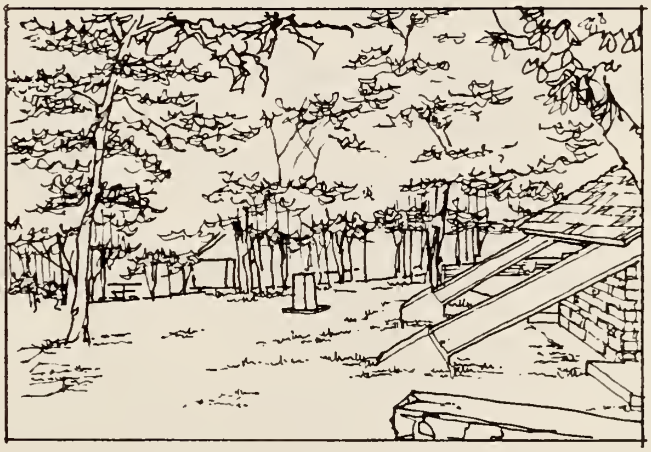


FIGURE 1 CONTINUED SLIDE SURROGATE SERIES -SHAWNEE MISSION, PARK 3: Sketches by Author

IMAGE 7

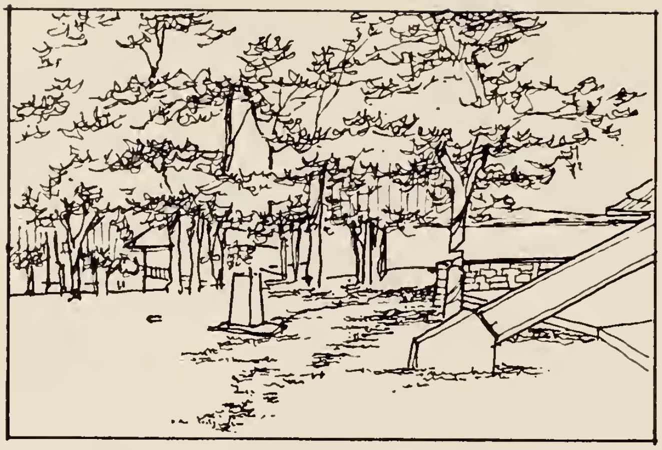


IMAGE 8

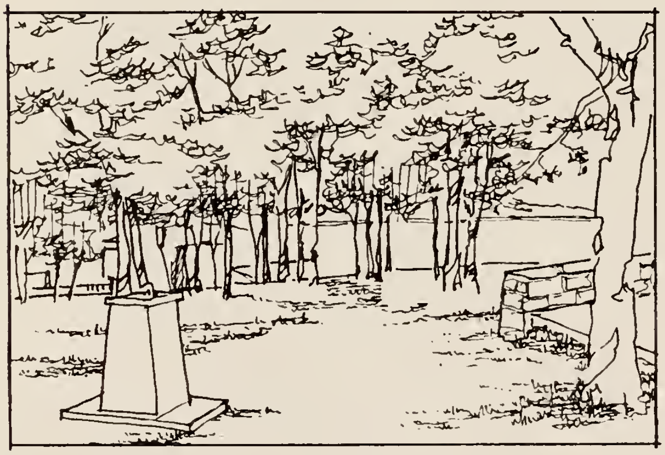


IMAGE 9

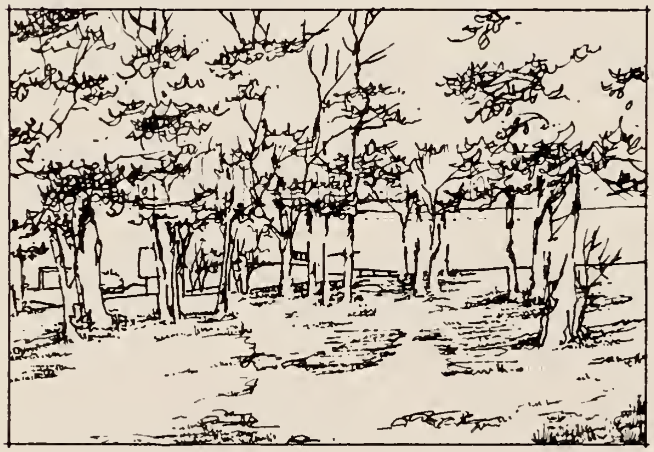


FIGURE 1 CONTINUED SLIDE SURROGATE SERIES
-SHAWNEE MISSION, PARK 3: Sketches by Author

IMAGE 10

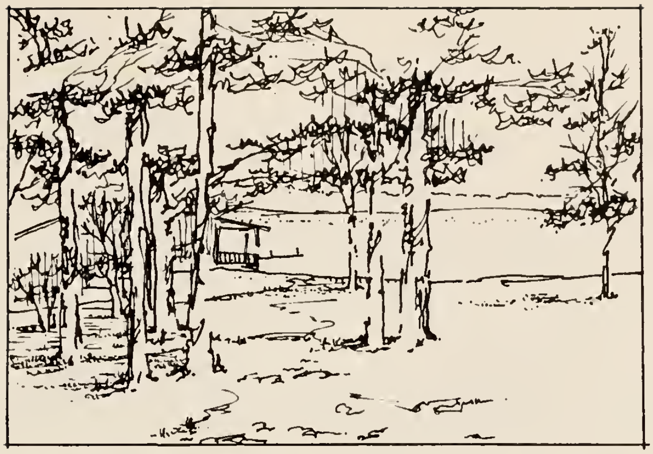


IMAGE 11

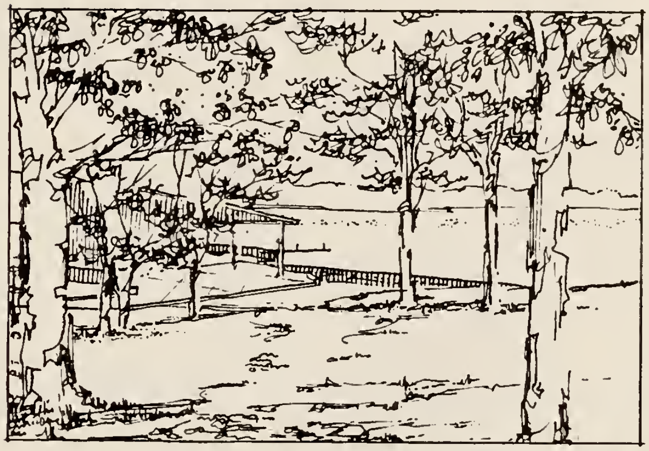


IMAGE 12

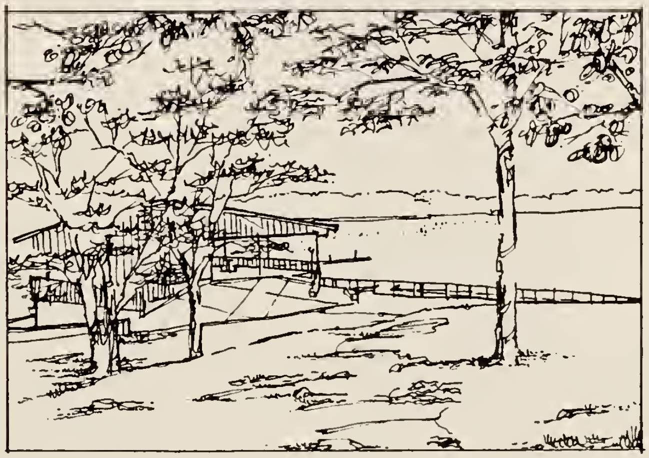


FIGURE 1 CONTINUED SLIDE SURROGATE SERIES
-SHAWNEE MISSION, PARK 3: Sketches by Author

IMAGE 13

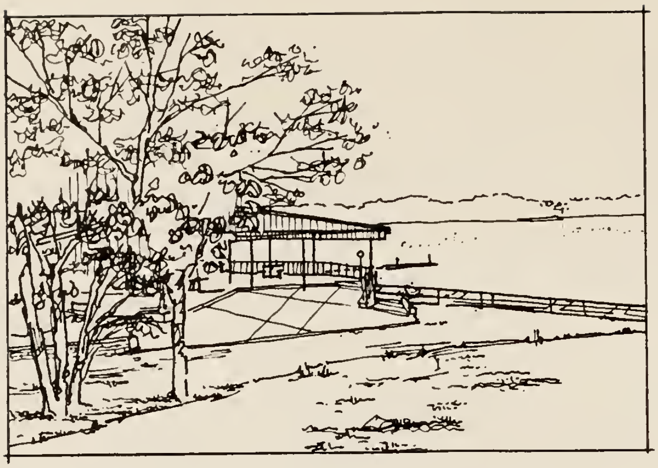


IMAGE 14

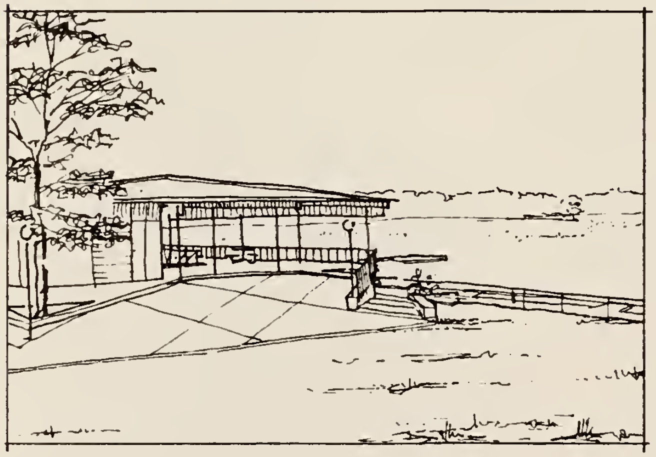


IMAGE 15

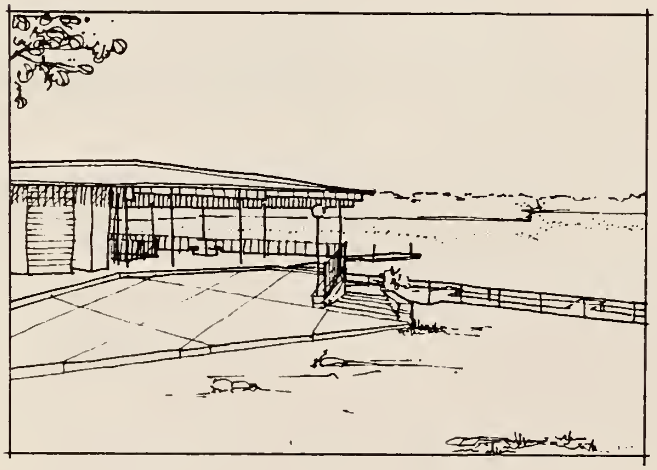


FIGURE 1 CONTINUED SLIDE SURROGATE SERIES -SHAWNEE MISSION, PARK 3: Sketches by Author

IMAGE 16

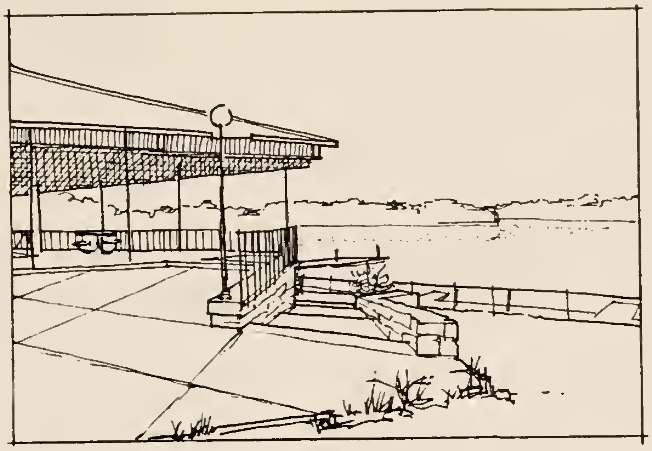


IMAGE 17

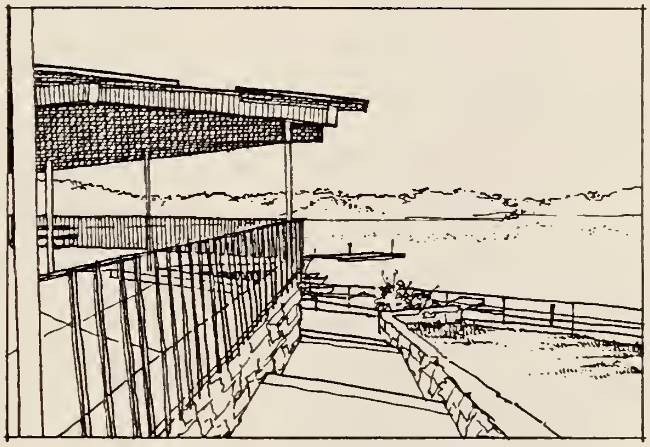


IMAGE 18

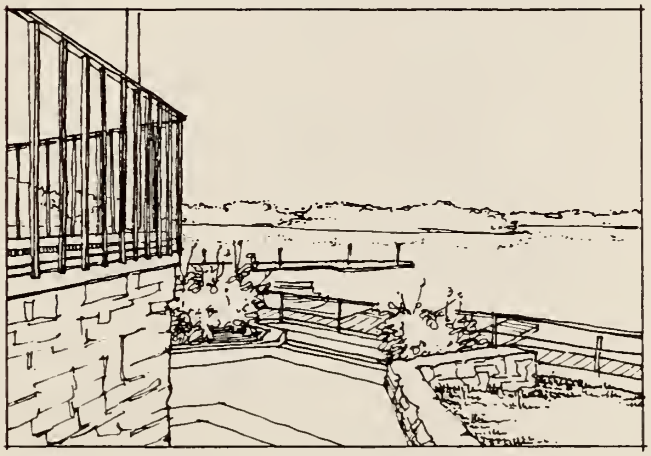


FIGURE 1 CONTINUED SLIDE SURROGATE SERIES -SHAWNEE MISSION, PARK 3: Sketches by Author

IMAGE 19

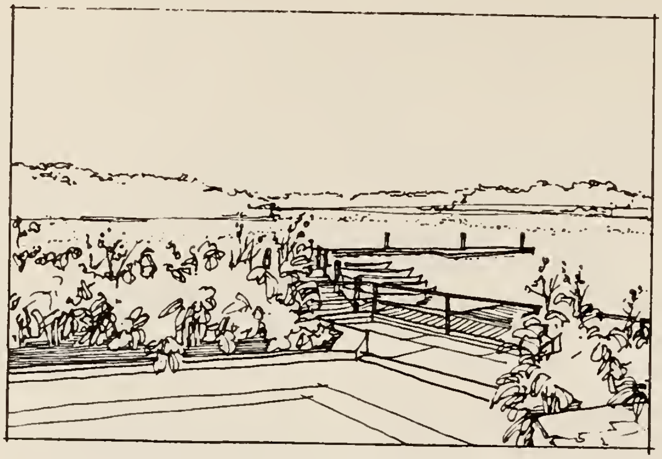


IMAGE 20

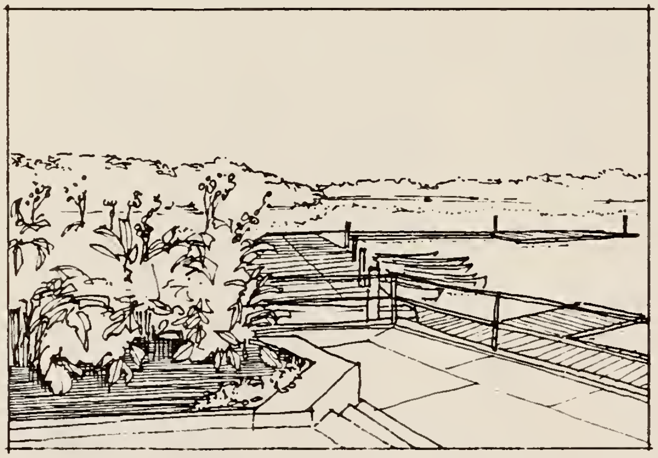


IMAGE 21

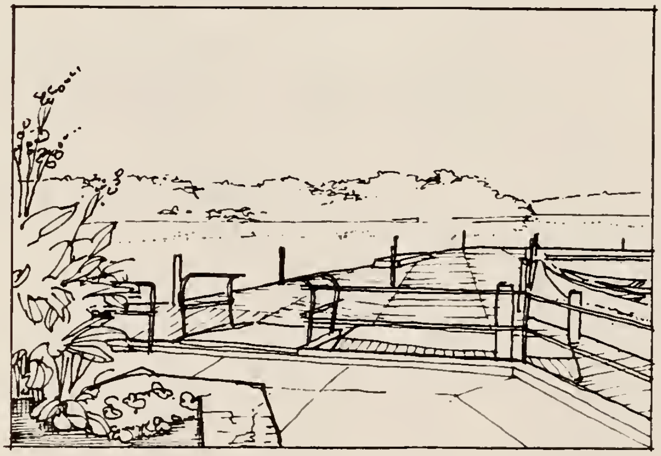


FIGURE 1 CONTINUED SLIDE SURROGATE SERIES -SHAWNEE MISSION, PARK 3: Sketches by Author

IMAGE 22

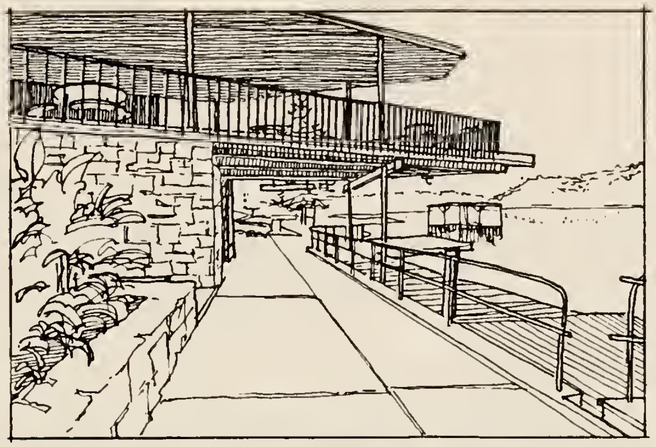


IMAGE 23

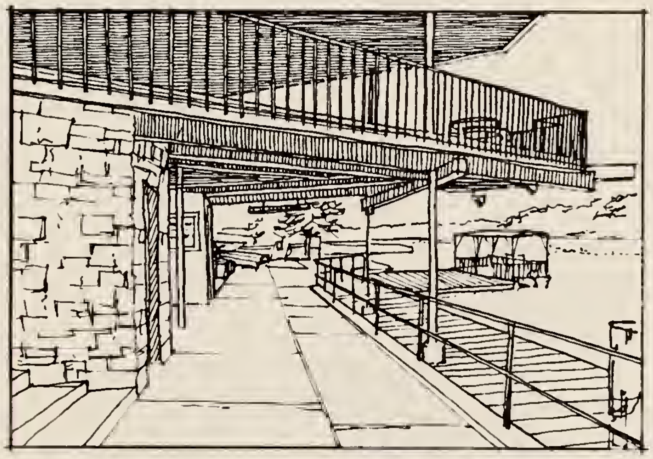


IMAGE 24

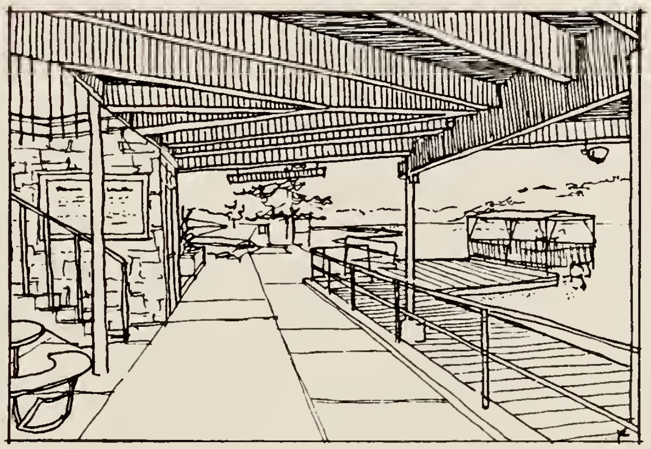


FIGURE 1 CONTINUED SLIDE SURROGATE SERIES -SHAWNEE MISSION, PARK 3: Sketches by Author

IMAGE 25

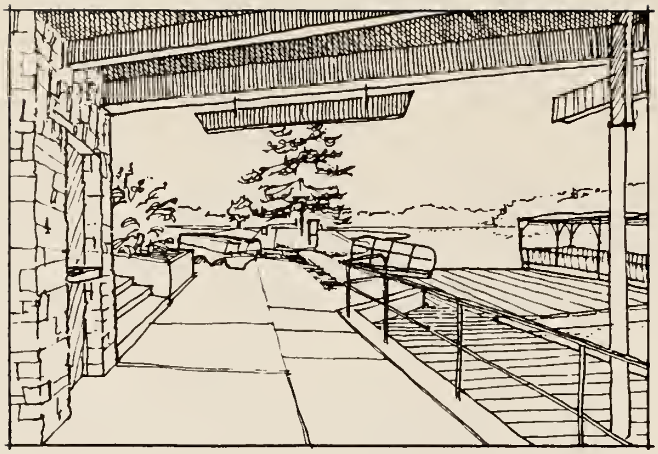


FIGURE 1 CONTINUED SLIDE SURROGATE SERIES -SHAWNEE MISSION, PARK 3: Sketches by Author

SAMPLE

The test sample included female and male Kansas State University students. The sample consisted of one hundred and sixty students enrolled in Theory of Environmental Design II, College of Architecture and Design, Environmental Design department. The average participant age was 20 for both women and men. Twenty-eight percent of the participants were women.

Exposure to the values and theories of the environmental design professions are minimal in first and second year students. During this research, Kansas State University had an open admission policy and consequently many students entered the Architecture and Design program on an experimental basis. In past years, almost sixty percent of the people who initially selected the College of Architecture and Design transferred, without penalty, to another curriculum within the University. The generalizability of the information gathered from this sample group is limited to 20 year old freshmen college students.

ADMINISTRATION

Volunteers for this study were solicited from the Spring, 1989, Theory of Environmental Design II class at Kansas State University. Students were asked if they would view slides and complete a questionnaire which would reveal information concerning sense of place. Prior to beginning the questionnaire, a statement of informed consent was read aloud and the students were reassured that participation or lack of participation would not influence their course grade. One hundred and sixty students chose to participate. Computer read forms were used for those items which lent themselves to this approach. Potential activities and ethnicity were surveyed in an open-ended format.

An informative introduction and instructions were read aloud. Participants were asked to respond to three preliminary questions on preferred park activities prior to viewing the slides. When the participants appeared to be finished with the first three items, instructions and a description of sense of place for the next set of questions were read aloud. Twenty-five slides showing views of City Park, Manhattan, were shown at three second intervals. At the end of this set of slides the participants were asked to evaluate the park's sense of place. The same procedure was followed for items five and six which corresponded to the Lost 80, Lansing and Shawnee Mission, Kansas City parks respectively.

Additional instructions were given for items seven through sixty. Again, slides of City Park in Manhattan, referred to as Park 1 in all communication with the participants, were shown at three second intervals. Participants responded to items seven to twenty-four which measured components of sense of place for City Park. The same procedure was followed for Park 2, Lost 80, which corresponded to items twenty-five to forty-two and for Park 3, Shawnee Mission, which corresponded to items forty-three to sixty. After respondents had completed their evaluation of Park 3 they were instructed to complete items sixty-one to sixty-four which described demographics.

QUESTIONNAIRE DEVELOPMENT

The sense of place questionnaire reflects the concept of sense of place as used by several authors and researchers. The development of this questionnaire started with scouring the literature for usages and definitions of sense of place. Key words and concepts were drawn from these sources.

SENSE OF PLACE QUESTION DEVELOPMENT

The questions outlined below are related to the sense of place definition used for this study. The four components include personal affect, identification, memorability and compatibility. Face validity, the degree to which a test appears to measure what it purports to measure (Gay, 1981), was established through the involvement of committee members. The question responses were based on a five point Likert scale. Appendix 1 is a copy of the questionnaire used.

Component 1: Personal Affect

Question: "In this place I would feel ______________."

excited	**1**	**2**	**3**	**4**	**5**	**gloomy**
pleasant	**1**	**2**	**3**	**4**	**5**	**unpleasantness**
relaxed	**1**	**2**	**3**	**4**	**5**	**distressed**
aroused	**1**	**2**	**3**	**4**	**5**	**sleepy**

Personal affect involves the human feelings or emotions that people verbally attribute to a place (Russell & Pratt, 1980). Places can arouse positive or negative feelings. The appraisals of a place can be influenced by a person's values, experiences and personality. In this component, pleasant descriptors are associated with the perception of a positive sense of place.

Component 2: Identifiable

Question: This park would be easy for me to recognize again.
strongly agree 1 2 3 4 5 strongly disagree

Please think about the features you believe contribute to the park's recognizability for you.

landform:
very important 1 2 3 4 5 very unimportant
vegetation:
very important 1 2 3 4 5 very unimportant
water:
very important 1 2 3 4 5 very unimportant
animal life:
very important 1 2 3 4 5 very unimportant
built objects:
very important 1 2 3 4 5 very unimportant

Identifiability is the combination of physical cues which people use to identify or recognize a place. The physical and symbolic cues for identification are influenced by individual experiences, values and expectations. In this study the interest lies in whether or not there are gender differences in identification. The contribution of the individual elements to identity were studied to find if any elements contributed a disproportionate amount.

Component 3: Memorable

Question: The image of this park is strong enough to make a lasting impression in my memory.
strongly agree 1 2 3 4 5 strongly disagree

Memorability is the ability of people to remember or recall a place from their past experience with that place. The memory could be positive or negative. One purpose of this study is to learn if there is any relationship between memory and personal affect.

Component 4: Compatible

Question: The activities I like to do in a public park are...

with other people	**1 2 3 4 5**	**by myself**
active	**1 2 3 4 5**	**passive**
dependent more on the natural features	**1 2 3 4 5**	**dependent more on the built features**

In this park, the activities I would like to do are...

with other people	**1 2 3 4 5**	**by myself**
active	**1 2 3 4 5**	**passive**
dependent more on the natural features	**1 2 3 4 5**	**dependent more on the built features**

In the space below, please list the activities you would like to do in this park.

Compatibility is the degree of match between a person's preferred activities and the anticipated activities in a place. In this study the relationship between compatibility and affect are evaluated. The contribution of specific activities to compatibility of a park were studied to find if any activities contributed a disproportionate amount.

Safety

Question: I would feel safe in this park by myself during the day.
strongly agree 1 2 3 4 5 strongly disagree

I would feel safe in this park by myself after dark.
strongly agree 1 2 3 4 5 strongly disagree

Although safety was not a component of the sense of place definition used in this study it was included in the questionnaire. Gender differences in feelings of safety were examined. Feelings of safety in a park were evaluated to learn if this aspect should be given further study in sense of place research.

Sense of Place

Question: This park would evoke a strong sense of place for me.
strongly agree 1 2 3 4 5 strongly disagree

I would feel a strong sense of place in this park.
strongly agree 1 2 3 4 5 strongly disagree

Sense of place was evaluated in two separate items on the questionnaire. The purpose of this was to compare the two reactions and check for consistency in responses. The first question was asked as an initial response to the park and the second question was asked during the evaluation process.

DEMOGRAPHICS QUESTION DEVELOPMENT

All of the information gathered is anonymous and names are confidential in this respect. Answers were recorded on a computer read card. Demographics information is used for the identification of gender and to control for confounding variables such as preference for a specific landscape type.

Age and ethnicity were solicited in an open-end format. Classification of landscape types by terrestrial biome is used to control for individual preferences. Most people identify landscapes by the dominant vegetative type (Lane, 1986) and terrestrial biomes are defined by the major plant cover. Therefore, this system of classification corresponds with how people identify landscape types. The classifications are coastal, desert, forest, mountain and prairie.

SPSS-X STATISTICAL PROGRAM

To reduce human mathematical errors the statistics were calculated with an SPSS-X software package on a main-frame computer. The computer-read cards were easily translated into the raw data format required for use by the program.

Simple statistics such as the t-test and chi-square were executed on raw and computed variables. Cross-tabulation was possible with the program. This allowed calculations to be performed on the group as a whole as well as on each gender set.

Of interest in this study is 1) the difference in responses between female and male groups for the proposed variables and variable relationships and 2) documentation of the masking that takes place in combined groups. The statistical tests chosen for this study were selected as the simplest, most efficient way to test the hypothesis. The t-test was selected for use in establishing if significant gender differences existed in the variable responses. The chi-square was selected for establishing the existence, or non-existence, of positive relationships between the variables. Plot charts were chosen for a visual aid in understanding how the subjects' responses relate to each other and the individual variables. Regression analysis of the relationships between the sense of place components would be useful to further refine the definition of sense of place developed in this study. Such refinement is suggested for further research.

CHAPTER 4 RESULTS

INTRODUCTION

The study was administered as described in the methodology chapter. One hundred and sixty of the returned questionnaires were usable out of one hundred and seventy-six questionnaires administered. The study population consisted of forty-five women and one hundred and fifteen men, 28% and 72% respectively. Questionnaire item means are located in Appendix 1.

Ethnicity was not included in the demographic statistics because a high proportion of the participants misinterpreted some of the options. The lack of an ethnicity score did not introduce any problems with the analysis. The responses on compatibility were not great enough to statistically analyze. Therefore the sense of place component, compatibility, was not analyzed with the other data. Instead, this information was used to suggest directions for further research.

No problems were experienced with applying the SPSS-X computer program. Descriptive statistics were generated along with frequencies, t-tests, chi-squares and plots.

Responses were scored in a range of -10 to +10 in five unit intervals. The data were divided by sex and by park during analysis. The results from the data are discussed in the following pages.

SENSE OF PLACE VARIABLE RELATIONSHIPS -TOTAL SCORE

Table 1 shows relationships between sense of place, personal affect, identification, memorability and safety. The columns show respectively percentages for response of females and response of males for all three parks combined. The plot charts in each column were simplified by quartering and calculating cell percentages. Percentage of response is indicated for each quadrant of the plot. Asterisks indicate a chi-square percentile of .95 or greater between the variables. The chi-square test used here indicates that the greatest chance of error in the prediction of relationships is five percent.

The female responses showed no significant relationships between the variables. The male responses showed significant relationships for all but two of the variable sets. Personal affect was not significantly related to sense of place or memorability for males. The numerical scores on the women's and men's plot charts differed the most when safety was a variable.

```
    SENSE OF PLACE
           Female                    Male
     hi-low                     hi-hi
     -----------------          ---------------
A   ::          :         :           :        :
F   ::  15.6%      77.8%  :  27.8%      68.7%  :
F   ::__________:_________:___________:________:
E   ::          :         :           :        :
C   ::   4.4%       2.2%  :   1.7%       1.7%  :
T   ::          :         :           :        :
     -----------------          ---------------
     low-low                    low-hi
```

```
    SAFETY
           Female                    Male
     hi-low                     hi-hi
     -----------------          ---------------
A   ::          :         :           :        :
F   ::  31.1%      62.2%  :  11.3%*     85.2%*:
F   ::__________:_________:___________:________:
E   ::          :         :           :        :
C   ::   4.4%       2.2%  :   0.9%*      2.6%*:
T   ::          :         :           :        :
     -----------------          ---------------
     low-low                    low-hi
```

```
    MEMORABLE
           Female                    Male
     hi-low                     hi-hi
     -----------------          ---------------
A   ::          :         :           :        :
F   ::  11.1%      82.2%  :  21.2%      76.1%  :
F   ::__________:_________:___________:________:
E   ::          :         :           :        :
C   ::   2.2%       4.4%  :   0.9%       1.8%  :
T   ::          :         :           :        :
     -----------------          ---------------
     low-low                    low-hi
```

Asterisks indicate a chi-square percentile of .95 or greater.

TABLE 1 SIMPLIFIED FREQUENCY PLOTS - TOTAL SCORE

```
       IDENTIFIABLE
             Female                     Male
        hi-low                  hi-hi
        -----------------       ---------------
  A    ::         :          :         :        :
  F    ::  13.3%     80.0%   :   9.6%*   86.8%*:
  F    ::_________:__________:_________:________:
  E    ::         :          :         :        :
  C    ::   4.4%      2.2%   :   0.9%*    2.6%*:
  T    ::         :          :         :        :
        -----------------       ---------------
        low-low                 low-hi


       MEMORABLE
             Female                      Male
        hi-low                  hi-hi
  I     ----------------        ----------------
  D    ::         :          :         :        :
  E    ::  13.3%     73.3%   :   1.8%*   76.8%*:
  N    ::_________:__________:_________:________:
  T    ::         :          :         :        :
  I    ::   4.4%      8.9%   :   8.9%*   12.5%*:
  F    ::         :          :         :        :
  Y     -----------------       ---------------
        low-low                 low-hi


       IDENTIFIABLE
             Female                     Male
        hi-low                  hi-hi
        -----------------       ---------------
  S    ::         :          :         :        :
  A    ::   4.4%     60.0%   :  15.9%* 71.7%*  :
  F    ::_________:__________:_________:________:
  E    ::         :          :         :        :
  T    ::  13.3%     22.2%   :   6.2%*    6.2%*:
  Y    ::         :          :         :        :
        -----------------       ---------------
        low-low                 low-hi
```

Asterisks indicate a chi-square percentile of .95 or greater.

TABLE 1 CONTINUED SIMPLIFIED FREQUENCY PLOTS - TOTAL SCORE

```
     MEMORABLE
           Female                    Male
      hi-low                  hi-hi
      -----------------       ---------------
S    ::        :          :        :        :
A    ::   6.7%     57.8%  :   7.9%*  79.8%*:
F    ::________:_________:_________:________:
E    ::        :          :        :        :
T    ::   6.7%     28.9%  :   2.6%*   9.6%*:
Y    ::        :          :        :        :
      -----------------       ---------------
      low-low                 low-hi


     SENSE OF PLACE
           Female                    Male
      hi-low                  hi-hi
      -----------------       ---------------
S    ::        :          :        :        :
A    ::   6.7%     57.8%  :  22.6%*  65.2%*:
F    ::________:_________:_________:________:
E    ::        :          :        :        :
T    ::  13.3%     22.2%  :   7.0%*   5.2%*:
Y    ::        :          :        :        :
      -----------------       ---------------
      low-low                 low-hi
```

Asterisks indicate a chi-square percentile of .95 or greater.

TABLE 1 CONTINUED SIMPLIFIED FREQUENCY PLOTS - TOTAL SCORE

SENSE OF PLACE VARIABLE RELATIONSHIPS -BY PARK

Table 2 shows each of the parks considered separately with respect to relationships between personal affect, sense of place, safety, identifiability and memorability. The total for all parks is included as a summary of the frequency plots. The percent of positively related term sets is calculated for both genders.

When each of the three parks are considered separately, the percentage of positively related term sets increases from Park 1 to Park 3. The female group begins at 12.5% for Park 1, 50.0% for Park 2 and concludes with 62.5% for Park 3. The males exhibit a similar trend but begin with 62.5% and end with 100.0%. When all parks are totaled, the positively related term sets are 0.0% female and 75.0% male. Of interest to this study is a) the results produced when all parks are totaled, and b) the difference between the female and male percentages of related variable sets.

In Park 1, a difference was found between the response of female and male groups. The female group found only one variable set, safety and memorability, to be positively related. The male group showed a positive relationship for five of the eight variable sets.

In Park 2 the differences between female and male groups also showed clearly. The male found all except safety and sense of place to be significantly related. The female group showed a positive relationship for four of the eight variable sets.

In Park 3, the male group showed all sets to be related. The female group showed a positive relationship for five of the eight variable sets.

TOTAL FOR ALL PARKS

	FEMALE	MALE
PERSONAL AFFECT BY SENSE OF PLACE		
PERSONAL AFFECT BY SAFETY		X
PERSONAL AFFECT BY MEMORABLE		
PERSONAL AFFECT BY IDENTIFIABLE		X
IDENTIFIABLE BY MEMORABLE		X
SAFETY BY IDENTIFIABLE		X
SAFETY BY MEMORABLE		X
SAFETY BY SENSE OF PLACE		X
PERCENT OF POSITIVELY RELATED TERM SETS	0 0.0%	6 75.0%

The symbol X indicates a chi-square percentile of .95 or greater.

TABLE 2 PRESENCE OF RELATIONSHIP: CHI-SQUARE -TOTAL SCORE AND BY PARK

PARK 1 - CITY PARK	FEMALE	MALE
PERSONAL AFFECT BY SENSE OF PLACE		X
PERSONAL AFFECT BY SAFETY		X
PERSONAL AFFECT BY MEMORABLE		X
PERSONAL AFFECT BY IDENTIFIABLE		X
IDENTIFIABLE BY MEMORABLE		X
SAFETY BY IDENTIFIABLE		
SAFETY BY MEMORABLE	X	
SAFETY BY SENSE OF PLACE		
PERCENT OF POSITIVELY RELATED TERM SETS	1 12.5%	5 62.5%

The symbol X indicates a chi-square percentile of .95 or greater.

TABLE 2 CONTINUED PRESENCE OF RELATIONSHIP: CHI-SQUARE -TOTAL SCORE AND BY PARK

PARK 2 -LOST 80

	FEMALE	MALE
PERSONAL AFFECT BY SENSE OF PLACE	X	X
PERSONAL AFFECT BY SAFETY		X
PERSONAL AFFECT BY MEMORABLE	X	X
PERSONAL AFFECT BY IDENTIFIABLE		X
IDENTIFIABLE BY MEMORABLE	X	X
SAFETY BY IDENTIFIABLE	X	X
SAFETY BY MEMORABLE		X
SAFETY BY SENSE OF PLACE		
PERCENT OF POSITIVELY RELATED TERM SETS	4 50.0%	7 87.5%

The symbol X indicates a chi-square percentile of .95 or greater.

TABLE 2 CONTINUED PRESENCE OF RELATIONSHIP: CHI-SQUARE -TOTAL SCORE AND BY PARK

PARK 3 -SHAWNEE MISSION

	FEMALE	MALE
PERSONAL AFFECT BY SENSE OF PLACE		X
PERSONAL AFFECT BY SAFETY	X	X
PERSONAL AFFECT BY MEMORABLE	X	X
PERSONAL AFFECT BY IDENTIFIABLE		X
IDENTIFIABLE BY MEMORABLE	X	X
SAFETY BY IDENTIFIABLE		X
SAFETY BY MEMORABLE	X	X
SAFETY BY SENSE OF PLACE	X	X
PERCENT OF POSITIVELY RELATED TERM SETS	5 62.5%	8 100.0%

The symbol X indicates a chi-square percentile of .95 or greater.

TABLE 2 CONTINUED PRESENCE OF RELATIONSHIP: CHI-SQUARE -TOTAL SCORE AND BY PARK

SENSE OF PLACE VARIABLE RELATIONSHIP -BY GROUP

Table 2 above examines the variable sets on a park by park basis. When the variables are examined together without the physical separation by park, additional information is available (see Table 3). The female and male groups are again divided. A chi-square percentile of .95 or greater is indicated by a 'T' for the total of all parks, a '1' for Park 1, a '2' for Park 2 and a '3' for Park 3. Positively related term sets were calculated for each variable set horizontally across the table and for each group vertically.

The male group showed consistent evaluations of the variables with minor influences from the different parks. Of the term sets, 87.4% were related for the male group. The female group displayed a somewhat erratic evaluation pattern with only 31.3 % of the possible related term sets. Identifiable by memorable and personal affect by memorable each were related 75.0% of the time. When safety was combined with both personal affect and memorable the relationship occurred in 62.5% of the possible combinations. The lowest occurring set was safety by sense of place, with 37.5% of the cases related.

	FEMALE	MALE	PERCENT RELATED
PERSONAL AFFECT BY SENSE OF PLACE	2	123	50.0%
PERSONAL AFFECT BY SAFETY	3	T123	62.5%
PERSONAL AFFECT BY MEMORABLE	23	T123	75.0%
PERSONAL AFFECT BY IDENTIFIABLE		T123	50.0%
IDENTIFIABLE BY MEMORABLE	23	T123	75.0%
SAFETY BY IDENTIFIABLE	2	T 23	50.0%
SAFETY BY MEMORABLE	1 3	T 23	62.5%
SAFETY BY SENSE OF PLACE	3	T 3	37.5%
PERCENT RELATED BY GROUP	31.3%	87.4%	

A chi-square percentile of .95 or over is indicated by a:
T for total of all parks
1 for Park 1
2 for Park 2
3 for Park 3

TABLE 3 PRESENCE OF RELATIONSHIP: CHI-SQUARE -BY GROUP

SENSE OF PLACE VARIABLES AND GENDER DIFFERENCES

Table 4 shows the female and male mean scores for each park individually and the total of all parks. The range of possible scores was from -10.0 to +10.0. A significant difference existed between the female and male scores if a t-test percentile was .95 or greater.

On the total for all parks, sense of place and safety showed significant difference of .95 or greater for personal affect. Park 2 showed a significant difference for sense of place, personal affect and safety. Park 3 showed no significant differences.

A significant difference was found for safety in three of the four calculations. Identification and memorability failed to show a significant difference. Park 3 received the highest mean scores for all but one variable. The female group ranked Park 2 as having the highest sense of place.

TOTAL FOR ALL PARKS	MEAN female	MEAN male	SIGNIFICANT DIFFERENCE
SENSE OF PLACE	2.56	1.41	YES
PERSONAL AFFECT	4.34	4.10	
SAFETY	0.67	3.83	YES
IDENTIFICATION	3.11	3.76	
MEMORABILITY	2.59	1.95	

PARK 1 -CITY PARK	female	male	
SENSE OF PLACE	-3.68	-3.02	
PERSONAL AFFECT	0.71	1.66	
SAFETY	-2.50	2.67	YES
IDENTIFICATION	-3.24	-1.12	
MEMORABILITY	-3.11	-3.49	

PARK 2 -LOST 80	female	male	
SENSE OF PLACE	5.94*	2.86	YES
PERSONAL AFFECT	6.00	4.96	YES
SAFETY	1.25	3.68	YES
IDENTIFICATION	5.52	3.48	
MEMORABILITY	4.12	2.38	

PARK 3 -SHAWNEE MISSION	female	male	
SENSE OF PLACE	4.76	3.74*	
PERSONAL AFFECT	6.71*	5.38*	YES
SAFETY	3.55*	4.93*	
IDENTIFICATION	6.91*	7.26*	
MEMORABILITY	6.81*	6.51*	

Asterisks indicate the highest score for each variable for combined, female and male groups.

YES indicates a group t-test percentile of .95 or greater for the female and male groups.

TABLE 4 MEAN AND GROUP T-TEST: VARIABLES -TOTAL SCORE AND BY PARK

PERSONAL AFFECT BY SENSE OF PLACE

Table 5 is a simplified frequency plot for the variable set, personal affect by sense of place. The columns show respectively percentages for response of females and males. Each simplified plot is shown with personal affect on the vertical axis and sense of place on the horizontal axis. Percentage of response is indicated for each quadrant of the plot. Asterisks indicate a chi-square percentile of .95 or greater between the variables. The variables mean scores are printed below the table for each park.

The male group showed a positive relationship for all parks. The female group showed a positive relationship for Park 2 only.

```
     SENSE OF PLACE -PARK 1
     Female                 Male
      -----------------   ---------------
A    ::          :          :         :       :
F    ::  34.2%     23.7%  :  15.7%*  28.1%*:
F    ::_________:_________:_________:________:
E    ::          :          :         :       :
C    ::  42.1%      0.0%  :  34.8%*     1.1%*:
T    ::          :          :         :       :
      -----------------   ---------------
     Personal Affect Mean Score
           0.71                         1.66
     Sense of Place Mean Score
          -3.68                -3.02

     SENSE OF PLACE -PARK 2
     Female                 Male
      -----------------   ---------------
A    ::          :          :         :       :
F    ::    5.1%*   94.9%*:  20.2%*  75.5%*:
F    ::_________:_________:_________:________:
E    ::          :          :         :       :
C    ::    0.0%*    0.0%*:    4.3%*   0.0%*:
T    ::          :          :         :       :
      -----------------   ---------------
     Personal Affect Mean Score
          6.00                 4.96
     Sense of Place Mean Score
          5.94                 2.86

     SENSE OF PLACE -PARK 3
     Female                 Male
      -----------------   ---------------
A    ::          :          :         :       :
F    ::   9.8%     83.0%  :  15.0%*  79.0%*:
F    ::_________:_________:_________:________:
E    ::          :          :         :       :
C    ::   7.3%      0.0%  :    2.0%*   4.0%*:
T    ::          :          :         :       :
      -----------------   ---------------
     Personal Affect Mean Score
          6.71                          5.38
     Sense of Place Mean Score
          4.76                          3.74
```

Asterisks indicate a chi-square percentile of .95 or greater.

TABLE 5 PERSONAL AFFECT BY SENSE OF PLACE: FREQUENCY PLOTS - BY PARK

SENSE OF PLACE -INITIAL AND EVALUATION RESPONSES

Sense of place was evaluated in two separate items on the questionnaire. The initial reactions to the parks were compared with the reactions developed through the guided evaluation process. The sense of place scores showed no significant difference. The score given during the evaluation process continued slightly in the direction already decided upon, see Table 6. For all other calculations in this study, the sense of place score is the average of the initial and evaluation responses.

SENSE OF PLACE

PARK 1 -CITY PARK	female	male
initial score	-3.09	-2.68
evaluation score	-4.69	-3.07
average score	-3.68	-3.02

PARK 2 -LOST 80	female	male
initial score	6.28	2.79
evaluation score	5.74	3.94
average score	5.94	2.86

PARK 3 -SHAWNEE MISSION	female	male
initial score	5.14	3.43
evaluation score	5.41	4.76
average score	4.76	3.74

TABLE 6 SENSE OF PLACE: MEAN -BY PARK

ELEMENTS OF IDENTIFICATION -GENDER DIFFERENCES

A comprehensive view of the elements related to identification are listed in Table 7. The data is organized by park for each of the gender groups. The elements evaluated were animals, built features, landform, vegetation, and water.

A significant difference between female and male scores appeared for three of the items. These were water in Park 2 and built features and landform in Park 3. No significant differences between gender responses were found in Park 1.

The element evaluated as contributing the most to a parks identifiability was consistent for both groups. Vegetation received the highest evaluation for Park 1. Water was ranked the highest for both Park 2 and Park 3. The rank ordering of the first three identification elements was consistant for the female and male groups.

PARK 1 -CITY PARK	female	male	sig. diff.
ANIMALS	-0.11 (5)	0.44 (4)	
BUILT FEATURES	1.11 (4)	0.13 (5)	
LANDFORM	1.48 (3)	2.19 (3)	
VEGETATION	**3.87 (1)**	**3.00 (1)**	
WATER	2.16 (2)	1.62 (2)	

PARK 2 -LOST 80	female	male	sig. diff.
ANIMALS	2.61 (4)	2.48 (4)	
BUILT FEATURES	-5.11 (5)	-3.95 (5)	
LANDFORM	6.14 (3)	4.69 (3)	
VEGETATION	6.25 (2)	5.04 (2)	
WATER	**8.64 (1)**	**7.39 (1)**	YES

PARK 3 -SHAWNEE MISSION	female	male	sig. diff.
ANIMALS	-0.11 (5)	0.53 (5)	
BUILT FEATURES	7.44 (2)	5.09 (2)	YES
LANDFORM	2.33 (3)	4.07 (3)	YES
VEGETATION	2.05 (4)	1.50 (4)	
WATER	**8.07 (1)**	**7.76 (1)**	

Bolded scores indicate the highest contributing element for each group.

() indicates rank order.

YES indicates a group t-test percentile of .95 or greater for the female and male groups.

TABLE 7 IDENTIFICATION ELEMENTS: MEAN & T-TEST -BY PARK

COMPATIBILITY -PREFERRED AND POTENTIAL ACTIVITIES

The participants were asked to list the activities they would like to do in each park. The activities listed reflected the available resources in the parks. The most influential park element was water which prompted the most specific responses.

Group sports, such as softball, volleyball and frisbee, dominated the lists. Picnicking, boating and walking were followed by more passive activities such as reading, relaxing and sunbathing. A variety of activities inappropriate for the layout and facilities provided in the parks were listed. The male group showed the greatest diversity of potential activities and also listed the most socially and spatially inappropriate responses. For example, the male group listed sexual activities as potential behavior in all three parks, whereas no female subject listed this response. Because of the open-ended nature of this item, significance was not tested.

Due to low number of responses, 61 out of 160, the compatibility component was not statistically analyzed with the other items. To establish a compatibility score for activities in the parks, preferred activities were compared with potential activities for each park.

Evaluations were classified by the participants in a closed-ended format. The resulting scores gave the difference between preferred and anticipated activities. A perfect match would be indicated by a score of '0'.

The data were calculated using the Euclidian Norm and the Manhattan Norm. The Euclidian Norm is a straight line measurement of the distance between two points, or, as the crow flies. The Manhattan Norm is the distance traveled along the right angles on a grid between two points.

When all parks are totaled, the Euclidian Norm scores were 11.01, combined, 12.92, female, and 10.27, male, within a range of 34.6 to 0. There was no significant difference between the female and male scores. The Manhattan Norm did show a significant difference between the scores. The scores were 15.10, combined, 18.73, female, and 13.69, male. The potential range of scores was 60 to 0. Because the tests results were contradictory and because both were near the significance threshold of .95, for the purposes of this study no significant difference was found between the female and male compatibility scores. Further testing may be justified due to the low number of responses.

GENDER DIFFERENCES IN PERCEPTION OF SENSE OF PLACE IN THE PUBLIC LANDSCAPE

CHAPTER 5 DISCUSSION

INTRODUCTION

The research hypothesis proposes that data analysis would show a gender difference in each of the variable scores and the variable relationships for the components of sense of place. The hypothesis proposes that sense of place is related to personal affect. Personal affect is then hypothesized as relating to identifiability, memorability, compatibility and safety. The following figure, Relationship of Results to Conceptual Model, illustrates the relationships found in this study.

The data was analyzed by dividing the responses into three groups; combined, female and male. For each group the parks were analyzed not only separately, but as all the parks totaled together. Partitioning of the data by groups and parks was made feasible by using elementary statistics and the SPSS-X computer program.

If the hypothesis had been accepted on all counts, every cell in Figure 2a, Presence of Relationships, would have shown a relationship. Also, a significant difference would have been found in each cell in Figure 2b, Gender

Differences, when the female and male groups were compared. Compatibility as a catagory was eliminated from the diagrams due to an insufficient population and thus inadequete data.

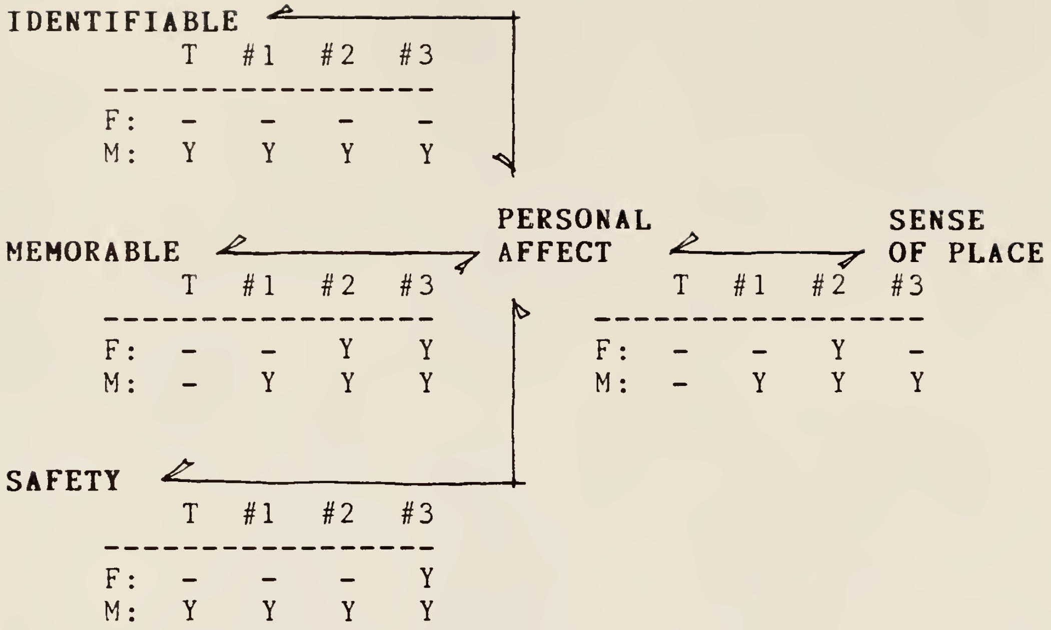
Figure 2 shows that the relationships proposed within the sense of place definition are present for the combined group in all cases and for the male group in each park individually. The female group indicates the presence of a positive relationship in only twenty-five percent of the possible variable combinations.

The group differences between genders are too great to be accounted for by the random individual differences that might be expected for a subjective construct such as sense of place. It may simply be that each gender defines sense of place differently. Another possibility is that a common factor in the definition of sense of place has not been identified. This is an area needing further study.

Overall, women had fewer variable combinations which were significantly related than either the male or the combined population. One possible reason for the unrelated responses of the females is that women have different criteria for evaluating public landscapes than men.

Further studies with larger sample sizes and a greater diversity of subjects are needed to verify these findings.

For the parks examined in this study, as the variables mean score increases so does the percentage of related variable sets. This indicates that as a parks evaluations become higher, on the scale of -10 to +10, the potential for the variables sets to show a relationship increases. The women did, however, score a higher sense of place for a park with fewer related variable sets.



IDENTIFIABLE

	T	#1	#2	#3
F:	-	-	-	-
M:	Y	Y	Y	Y

MEMORABLE

	T	#1	#2	#3
F:	-	-	Y	Y
M:	-	Y	Y	Y

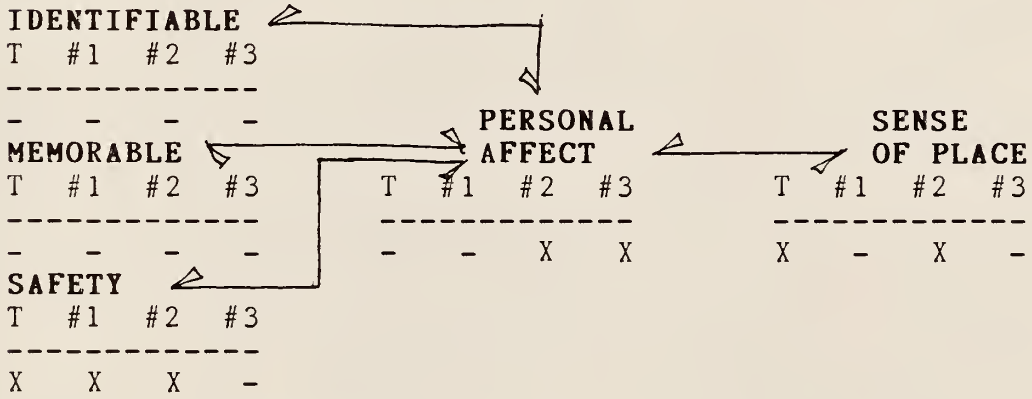
PERSONAL AFFECT – SENSE OF PLACE

	T	#1	#2	#3
F:	-	-	Y	-
M:	-	Y	Y	Y

SAFETY

	T	#1	#2	#3
F:	-	-	-	Y
M:	Y	Y	Y	Y

A) PRESENCE OF RELATIONSHIPS



IDENTIFIABLE

T	#1	#2	#3
-	-	-	-

MEMORABLE

T	#1	#2	#3
-	-	-	-

PERSONAL AFFECT

T	#1	#2	#3
-	-	X	X

SENSE OF PLACE

T	#1	#2	#3
X	-	X	-

SAFETY

T	#1	#2	#3
X	X	X	-

B) GENDER DIFFERENCES

T= total for all parks
#1= park 1 #2= park 2 #3= park 3
F= female group M= male group

Y= presence of a relationship between two variables
X= significant difference between female and male scores

FIGURE 2 RELATIONSHIP OF RESULTS TO CONCEPTUAL MODEL

SAFETY

The sense of place definition was derived from several sources, all written by men. This androcentric sampling of definition components lacked safety as a consideration in sense of place. The few sources in the literature that were written by women (Buttimer & Seamon, 1980; Kaplan, 1978, 1982) were found to be inappropriate for use in this research.

Intuitively, it seems that feelings of freedom from the threat of physical harm would favorably influence a person's response toward a park. It is this intuitive feeling that leads to the inclusion of safety as a variable on the questionnaire. The lack of references precluded its inclusion in the definition of sense of place. The results of this study suggest that safety may be an important part of the definition of sense of place.

Lynch (1960) uses "a sense of belonging and security" as a part of sense of place. It seems clear that security in this context refers to a psychological phenomenon of self esteem rather than a feeling of freedom from the threat of physical harm. No source, female or male, was found which used this latter understanding of safety.

Galen Cranz (1981a) proposes that the issues involving women's safety change with the changing fashions and fads in park design. Cranz holds a pessimistic view of women's safety in open space parks. She suggests that women "...defend themselves with a martial art" (p.77).

Whyte's research in urban plazas (1984) is not inconsistent with the findings of this study. He found that the best used plazas had a higher proportion of women users. This may indicate that women are looking for the feelings of safety that come from the surveillance of other users.

From the data generated in this study it appears that safety is the variable upon which the genders most strongly diverge. A study conducted by Leach et al. (1986) had as an assumption that men felt safe in urban landscapes whereas women felt fearful. The findings of this study support Leach's assumption.

It would be consistent with the findings of both Leach and this current study that women would visit a park with less sense of place to achieve greater feelings of personal affect and security. Further research is needed to confirm this relationship. It may prove valuable to analyze the safety scale to determine if socio-economic class stereotypes of the activities anticipated in a park are linked to feelings of security.

It is possible that women and men have different criteria for evaluating safety. Females have been found to prefer more open landscape views from a protected vantage point than from an unprotected one. The males also preferred open, as opposed to enclosed, views but from an unprotected vantage point (Nasar, Julian, Buchman, Humpreys & Mrohaly, 1983). The study of Nasar and others also documented that women's assessed safety was lower than men's for the same landscape view.

COMPATIBILITY

The results on compatibility imply that for both groups, activities are determined more by personal preference than by park layout. This was more true for the male group than the female group. Water stood out as an identifiable feature, and water-related activities had a high frequency. It may be that it takes some outstanding landscape feature to move people to change their ideas of potential activities.

Women appear to be more sensitive to socially imposed limitations on activities. Males had a greater variety and more inappropriate responses. For example, in Park 1, sexual activity ranked sixth in response frequency for males, whereas the females did not list sexual activity for any of the parks. Many male respondents used the same list of activities regardless of park, showing no response to the differences between parks.

IDENTIFIABILITY

Females and males ranked the first three elements of identity for each park in the same order of importance. For example, in Park 3 females and males both ranked water the highest, built features second and landform third. This confirms the lack of gender differences in the identifiability variable. However, the disparity between the genders in the other variables suggests that women and men attach different meanings to these elements.

SUMMARY

In summary, this thesis is a multi-disciplinary exploration of the links between gender and perceptions of sense of place in open-space system parks. The definition for sense of place was derived by scouring the literature for common elements or concepts. Sense of place was broken down into the components of identification, memorability, compatibility and personal affect. The aspect of safety, defined as freedom from the threat of harm, was not found in the male dominated literature but was included in this study as a potentially important facet of perceptions of sense of place.

Gender differences in perception were examined as they relate to each of the components listed above. A survey of one hundred and sixty undergraduates showed that sense of place, as defined in this study, is perceived differently by female and male groups. This study suggests that women and men perceive and evaluate space differently and therefore can be considered to be two different user groups. For this reason, splitting populations into female and male will reveal more about how space is perceived and used.

The data revealed the following conditions: a) a difference was found between genders for the following relationships, personal affect and sense of place, identifiability, memorability, and perceived safety. b) the relationships between variables were much more frequent for the male subjects than for the females. c) although the subject group was limited to 20 year old college students the results suggests that further research with a greater variety of subject groups would yield valuable results.

Some ideas for future research are to break down subject populations by sex, age, socio-economic class, ethnicity or personality. Further refinement of the sense of place definition could shed light on how people evaluate the landscape. Another approach would be to re-examine the results of an existing study which combined women and men into a single group to determine if the results differ according to gender.

While this research is concluded and much has been learned, much more remains to be explored. Sense of place, as defined in this study, is perceived differently by female and male groups. This study suggests that women and men perceive and evaluate parks differently and therefore can be considered to be two different user groups. For this reason, in spite of the additional time involved, splitting populations into male and female will reveal more about how park spaces are perceived and used. Using combined populations may have resulted in the oversight of safety as component of sense of place. It may well be that other important environment and behavior issues have been hidden in the use of combined populations.

The definition used for sense of place in this study was derived from several sources which understood and explained sense of place as a collection of elements or concepts (see Chapter 2, Literature Review). Many of the sources which described sense of place from women's points of view provided definitions which were too subjective for use in a quantitative study. This suggests that examining sense of place as a group of elements necessarily creates an androcentric bias.

To find a definition which allows the study of women's sense of place a more holistic understanding must be reached. Avenues towards this goal should strive to relate social, contextual and spatial patterns as they shape meaning in the landscape. The tool developed through this pursuit may be more sensitive for measuring sense of place not only for women but also for men.

The language of our society has a dearth of words to describe social settings. Because women have a more social understanding of space (Belenky et al. 1986; Nordstrom, 1985) methods of communication are limited. The lack of verbal communication alternatives has also placed researchers in the awkward situation of inventing words to describe their research (Hall, 1966).

Understanding how words define and structure our concepts of space and self can alter the words used during research concerning the environment and the design of new landscapes. Any time communication is expanded, so is design potential. Rather than compressing women and men into a single user group, our goal should be to recognize the diversity of users and understand how the landscape is interpreted. The meanings attributed to space and the surrounding elements can greatly alter how a park is viewed and experienced.

The research presented here has limited concrete applicability to the design professions. What can be deduced is the need for landscape architects to be sensitive to the needs of women and men as two discrete groups. Although women and men evaluate the elements of a landscape in similar ways the meanings applied to the landscape differ.

APPENDIX 1 SENSE OF PLACE QUESTIONNAIRE AND ITEM MEANS

STATEMENT OF INFORMED CONSENT

Pat Crawford is conducting a study for the completion of her master's research. The purpose of this research is to learn more about sense of place. She would appreciate your help in please answering some questions as they relate to slides. These questions should take about forty minutes.

Your participation is entirely voluntary and you may choose not to participate or discontinue participation at any time. There are no risks or immediate benefits to you, and your participation will not affect your grade in this course in any way.

The information you share will be anonymous and your name will be confidential in this respect.

Should you have any questions regarding the project or your participation, please feel free to contact Pat Crawford, Mail Box #9, Second Floor, Seaton Hall. Should you have any questions regarding your rights as a participant in this research project, you may contact Lyn Norris-Baker, Chair, Architecture and Design Subcommittee for the Protection of Human Subjects, Seaton Hall 211.

I will be happy to answer any questions now if you have any.

Activities in a public park can be very active, which requires a lot of energy, or they can be passive, which requires small amounts of energy. The activities can be done with other people or by one's self. The activities can also be geared more towards the natural features of the park or geared more towards the built features within the park.

For the following questions please fill in your answers on the enclosed score sheet. A response scale is provided below each question.

Please answer questions 1,2 and 3 now. When you are finished please wait for further instructions.

The activities I like to do in a public park are...

1. active 1 2 3 4 5 passive

2. with other people 1 2 3 4 5 by myself

3. dependant more on natural features 1 2 3 4 5 dependant more on built features

A sense of place can be asssociated with pleasant feelings and experiences. In addition to sense of place being a positive experience, there are many illusive qualities of a space which may contribute to perceiving a sense of place. People have defined sense of place in many different ways. Christopher Alexander has defined sense of place as "the quality without a name."

Please mark the number that best reflects your feelings about the parks you are shown. Please view all the slides for one park before choosing responses for that park. The monitor will inform you when each slide set is completed.

PARK 1

4. This park would evoke a strong sense of place for me.
strongly agree 1 2 3 4 5 strongly disagree

PARK 2

5. This park would evoke a strong sense of place for me.
strongly agree 1 2 3 4 5 strongly disagree

PARK 3

6. This park would evoke a strong sense of place for me.
strongly agree 1 2 3 4 5 strongly disagree

PLEASE WAIT

Please answer the questions on this page about PARK 1.

7. **The image of this park is strong enough to make a lasting impression in my memory.**
strongly agree 1 2 3 4 5 strongly disagree

8. **I would feel safe in this park by myself during the day.**
strongly agree 1 2 3 4 5 strongly disagree

Recognition is the combination of physical cues people use to identify a place. Please think about the features you believe contribute to the park's recognizability for you.

9. landform:
very important 1 2 3 4 5 very unimportant
10. vegetation:
very important 1 2 3 4 5 very unimportant
11. water:
very important 1 2 3 4 5 very unimportant
12. animal life:
very important 1 2 3 4 5 very unimportant
13. built objects:
very important 1 2 3 4 5 very unimportant

14. **I would feel safe in this park by myself after dark.**
strongly agree 1 2 3 4 5 strongly disagree

15. **This park would be easy for me to recognize again.**
strongly agree 1 2 3 4 5 strongly disagree

16. **I would feel a strong sense of place in this park.**
strongly agree 1 2 3 4 5 strongly disagree

In this park, the activities I would like to do are...

17. with other people 1 2 3 4 5 by myself
18. active 1 2 3 4 5 passive
19. dependant more on natural features 1 2 3 4 5 dependant more on built features

In this park, I would feel...

20. excited 1 2 3 4 5 gloomy
21. relaxed 1 2 3 4 5 distressed
22. alert 1 2 3 4 5 sleepy
23. pleasant 1 2 3 4 5 unpleasant

24. **In the space below, please list the activities you would like to do in this park.**

PLEASE WAIT

Please answer the questions on this page about PARK 2.

25. **I would feel safe in this park by myself during the day.**
strongly agree 1 2 3 4 5 strongly disagree

In this park, the activities I would like to do are...
26. dependant more on natural features 1 2 3 4 5 dependant more on built features
27. with other people 1 2 3 4 5 by myself
28. active 1 2 3 4 5 passive

29. **This park would be easy for me to recognize again.**
strongly agree 1 2 3 4 5 strongly disagree

30. **I would feel a strong sense of place in this park.**
strongly agree 1 2 3 4 5 strongly disagree

31. **I would feel safe in this park by myself after dark.**
strongly agree 1 2 3 4 5 strongly disagree

32. **The image of this park is strong enough to make a lasting impression in my memory.**
strongly agree 1 2 3 4 5 strongly disagree

In this park, I would feel...
33. alert 1 2 3 4 5 sleepy
34. excited 1 2 3 4 5 gloomy
35. relaxed 1 2 3 4 5 distressed
36. pleasant 1 2 3 4 5 unpleasant

Recognition is the combination of physical cues which people use to identify a place. Please think about the features you believe contribute to the park's recognizability for you.
37. built objects:
very important 1 2 3 4 5 very unimportant
38. vegetation:
very important 1 2 3 4 5 very unimportant
39. water:
very important 1 2 3 4 5 very unimportant
40. landform:
very important 1 2 3 4 5 very unimportant
41. animal life:
very important 1 2 3 4 5 very unimportant

42. **In the space below, please list the activities you would like to do in this park.**

PLEASE WAIT

Please answer the questions on this page about PARK 3.

43. **This park would be easy for me to recognize again.**
strongly agree 1 2 3 4 5 strongly disagree

In this park, I would feel...
44. pleasant 1 2 3 4 5 unpleasant
45. alert 1 2 3 4 5 sleepy
46. relaxed 1 2 3 4 5 distressed
47. excited 1 2 3 4 5 gloomy

48. **The image of this park is strong enough to make a lasting impression in my memory.**
strongly agree 1 2 3 4 5 strongly disagree

49. **I would feel safe in this park by myself after dark.**
strongly agree 1 2 3 4 5 strongly disagree

In this park, the activities I would like to do are...
50. with other people 1 2 3 4 5 by myself
51. dependant more on natural features 1 2 3 4 5 dependant more on built features
52. active 1 2 3 4 5 passive

53. **I would feel a strong sense of place in this park.**
strongly agree 1 2 3 4 5 strongly disagree

Recognition is the combination of physical cues which people use to identify a place. Please think about the features you believe contribute to the park's recognizability for you.
54. vegetation:
very important 1 2 3 4 5 very unimportant
55. built objects:
very important 1 2 3 4 5 very unimportant
56. water:
very important 1 2 3 4 5 very unimportant
57. animal life:
very important 1 2 3 4 5 very unimportant
58. landform:
very important 1 2 3 4 5 very unimportant

59. **I would feel safe in this park by myself during the day.**
strongly agree 1 2 3 4 5 strongly disagree

60. **In the space below, please list the activities you would like to do in this park.**

CONTINUE TO NEXT PAGE

In addition to your perceptions of these parks please provide some background information about yourself. Please record your answers on the score sheet.

61. Gender: (1) female
(2) male

62. Age: ________ years

63. Ethnicity: **please circle response on questionnaire.**
(1) Afro-american
(2) Asian
(3) Asian-american
(4) Caucasian
(5) Hispanic
(6) Native-american
(7) Other, please specify ______________

64. Which of the following best describes the landscape you grew up in? If you moved, which of the landscape types do you remember the best?
(1) coastal
(2) desert
(3) forest
(4) mountain
(5) prairie

PLEASE LEAVE YOUR QUESTIONNAIRE AND SCORECARD WITH THE MONITOR.

THANK YOU FOR YOUR TIME AND COOPERATION.

QUESTIONNAIRE ITEM MEAN SCORES

Combined group N= 160 Female group N= 45 Male group N= 115

	COMBINED GROUP		FEMALE GROUP		MALE GROUP		VARIABLE
ITEM #	MEAN	VALID N	MEAN	VALID N	MEAN	VALID N	LABEL
1	3.81	113	3.39	31	3.96	82	ACTIVEC
2	6.31	118	6.00	35	6.45	83	PEOPLEC
3	4.64	112	3.79	33	5.00	79	NATURALC
4	-2.80	116	-3.09	34	-2.68	82	SOP1C
5	3.88	125	6.28	39	2.79	86	SOP2C
6	3.94	123	5.14	37	3.43	86	SOP3C
7	-3.37	123	-3.11	37	-3.45	86	IMAGE1
8	5.08	122	3.07	31	5.77	91	SAFEDAY1
9	2.54	124	1.97	33	2.75	91	LANDFRM1
10	4.13	121	4.86	35	3.84	86	VEGETAT1
11	2.07	135	2.44	39	1.93	96	WATER1
12	0.39	116	-0.13	39	0.65	77	ANIMAL1
13	0.52	126	1.35	37	0.17	89	BUILT1
14	-2.78	115	-6.86	35	-1.00	80	SAFEDRK1
15	-1.77	110	-3.24	34	-1.12	76	RECOGN1
16	-3.52	115	-4.69	32	-3.07	83	SOP1
17	3.77	122	3.53	34	3.86	88	PEOPLE1
18	2.54	116	1.94	31	2.77	85	ACTIVE1
19	3.45	113	1.67	30	4.10	83	NATURAL1
20	-1.84	79	-3.00	25	-1.30	54	EXCITED1
21	3.56	104	3.33	30	3.65	74	RELAXED1
22	0.12	87	-0.54	28	0.42	59	ALERT1
23	2.58	97	1.97	33	2.89	64	PLEASNT1

```
Combined group N= 160   Female group N= 45   Male group N= 115

          COMBINED GROUP    FEMALE GROUP      MALE GROUP       VARIABLE
ITEM #    MEAN   VALID N    MEAN   VALID N    MEAN   VALID N   LABEL
======    ==============    ==============    ==============   ======
25         6.08    139       5.00    38        6.49   101      SAFEDAY2
26         6.94    142       6.71    41        7.03   101      NATURAL2
27         2.63    112       2.50    30        2.68    82      PEOPLE2
28         1.30    108       1.92    26        1.10    82      ACTIVE2
29         4.01    111       5.52    29        3.48    82      RECOGN2
30         4.47    114       5.74    34        3.94    80      SOP2
31        -0.89    112      -4.33    30        0.37    82      SAFEDRK2
32         2.88    118       4.12    34        2.38    84      IMAGE2
33         2.05    110       2.58    33        1.82    77      ALERT2
34         4.00     95       6.07    28        3.13    67      EXCITED2
35         7.07    135       7.70    37        6.84    98      RELAXED2
36         7.31    134       7.56    41        7.20    93      PLEASNT2
37        -5.32    127      -6.08    37       -5.00    90      BUILT2
38         5.95    142       6.40    43        5.76    99      VEGETAT2
39         8.15    149       9.05    42        7.80   107      WATER2
40         6.32    125       6.75    40        6.12    85      LANDFRM2
41         3.36    119       3.59    32        3.28    87      ANIMAL2
43         7.16    146       6.91    42        7.26   104      RECOGN3
44         6.29    120       6.67    36        6.13    84      PLEASNT3
45         6.95    113       8.28    32        6.42    81      ALERT3
46         5.57    114       6.61    31        5.18    83      RELAXED3
47         5.68    103       6.72    32        5.21    71      EXCITED3
48         6.59    132       6.81    36        6.51    96      IMAGE3
49         1.31    107      -0.91    33        2.30    74      SAFEDRK3
```

Combined group N= 160   Female group N= 45   Male group N= 115

ITEM #	COMBINED GROUP MEAN	COMBINED GROUP VALID N	FEMALE GROUP MEAN	FEMALE GROUP VALID N	MALE GROUP MEAN	MALE GROUP VALID N	VARIABLE LABEL
50	6.75	143	8.38	37	6.18	106	PEOPLE3
51	-0.08	124	0.42	36	-0.28	88	NATURAL3
52	6.31	126	7.24	38	5.91	88	ACTIVE3
53	4.96	121	5.41	37	4.76	84	SOP3
54	2.34	111	3.00	30	2.10	81	VEGETAT3
55	6.83	131	8.21	39	6.25	92	BUILT3
56	8.27	150	8.45	42	8.19	108	WATER3
57	0.57	97	-0.17	29	0.88	68	ANIMAL3
58	4.96	113	3.03	33	5.75	80	LANDFRM3
59	7.30	137	8.06	36	7.03	101	SAFEDAY3
61	1.72	160	1.00	45	2.00	115	SEX
64	3.91	146	3.76	41	3.97	105	HOME

BIBLIOGRAPHY

ABELLO, R.P. and BERNALDEZ, F.G. (1986). "Landscape Preference and Personality." Landscape and Urban Planning. 13/ 19-28.

AIKEN, ROBERT S. (1976). "Towards Landscape Sensibility." Landscape. 20/3 20-28.

ALEXANDER, C. (1979). The Timeless Way of Building. Oxford Press: New York.

ALEXANDER, C. ISHIKAWA, S. and SILVERSTEIN, M. (1977). A Pattern Language. Oxford Press: New York.

APPLEYARD, DONALD. (1979). "The Environment as a Social Symbol: Within a Theory of Environmental Action and Perception." APA Journal. April/ 143-153.

ARDENER, SHIRLEY ed. (1978). Defining Females: The Nature of Women in Society. John Wiley & Sons: New York.

ASHCRAFT, NORMAN and SCHEFLEN, ALBERT E. (1976). People Space: The Making and Breaking of Human Boundries. Anchor Press: Garden City, NY.

BACON, WARREN. (1979). "Our National Landscape." IN: Our National Landscape. Elsner, Gary H. & Smardon, Richard C. eds. Government Technical Report PSW-35. USDA Forest Service: Berkeley, CA.

BECHTEL, R.B.; MARANS, R.W. and MICHELSON, W. eds. (1987). Methods in Environmental and Behavioral Research. Van Nostrand Rinehold Company: New York.

BECK, ROBERT. (1969). " Spatial Meaning and the Properties of the Environment." (1969). IN: Environmental Perception and Behavior. Research Paper No. 109. Lowenthal, David ed. Depart. Of Geography: Chicago.

BELENKY, MARY FIELD; CLINCHY, BLYTHE MCVICKER; GOLDBERGER, NANCY RULE; TARULE, JILL MATTUCK. (1986). Women's Ways of Knowing: the Development of Self, Voice, and Mind. Basic Books Inc.: New York.

BLALOCK JR., HUBERT M. (1979). Social Statistics. 2nd ed. McGraw-Hill: New York.

BLOOMER, KENT and MOORE, CHARLES. (1977). Body, Memory and Architecture. Yale Univ. Press: New Haven.

BOSSELMANN, PETER and CRAIK, KENNETH H. (1987). "Perceptual Simulations of Environments." IN: Methods in Environmental Research. Bechtel, R.B.; Marans, R.W. and Michelson, W. eds. Van Nostrand Rinehold Co.: New York.

BUHYOFF, G.J.; WELLMAN, J.D.; HARVEY, H. and ERASER, R.A. (1978). "Landscape Architects' Interpretations of People's Landscape Preferences." Journal of Environmental Management. 6/ 255-262.

BUREAU OF LAND MANAGEMENT. (1980). Visual Resource Management Program. Department of the Interior: Washington, D.C.

BUTTIMER, ANN and SEAMON, DAVID. (1980). The Human Experience of Space and Place. Croom Helm: London.

CALVIN, JAMES S.; DEARINGER, JOHN A. and CURTIN, MARYELLEN. (1972). "An Attempt at Assessing Preferences for Natural Landscapes." Environment and Behavior. 4/4 447/470.

CANTER, DAVID. (1983). "The Purposive Evaluation of Places: A Facet Approach." Environment and Behavior. 15/6 659-698.

CARPMAN, JAN REIZENSTEIN; GRANT, MYRON A. and SIMMONS, DEBORAH A. (1985) "No More Mazes." Progressive Architecture. 66/1 156-157.

___________. (1977). The Psychology of Place. Architectural Press Ltd.: London.

CRAIK, KENNETH H. (1975). "Individual Variations in Landscape Description." IN: Landscape Assessment: Values, Perceptions and Resources. Zube et al. eds. Dowden, Hutchinson & Ross, Inc.: Stroudsburg, PA.

___________. (1972). "Appraising the Objectivity of Landscape Dimensions." IN: Natural Environments: Studies in Theoretical and Applied Analysis. Krutilla, John V. ed. Johns Hopkins University Press: Baltimore.

CRANZ, GALEN. (1982). The Politics of Park Design. MIT Press: Massachusetts.

__________. (1981a). "The Sharon Building: The Transformation of Women's Recreational Needs in the Late Nineteenth-Century City." Heresies. 11/ 77-79.

__________. (1981b). "Women and Urban Parks: Their Roles as Users and Suppliers of Park Services." IN: Building For Women. Keller, Suzanne ed. Lexington Books: Lexington, MS.

__________. (1980). "Women in Urban Parks." Signs. 5/3S s79-s95.

__________. (1978). "Changing Roles of Urban Parks: From Pleasure Garden to Open Space." Landscape. 22/3 9-18.

DALY, MARY. (1978). Gyn/Ecology: The Metaethics of Radical Feminism. Beacon Press: Boston.

__________. (1973). Beyond God the Father: Toward a Philosophy of Women's Liberation. Beacon Press: Boston.

DAVIES, KATHERINE. (1987). "Historical Associations: Women and the Natural World." Women and Environments. Spring 4-7.

EHRLICH, GRETEL. (1986). The Solace of Open Spaces. Penguin Books: New York.

EISENSTEIN, HESTER and JARDINE, ALICE eds. (1985). The Future of Difference. Rutgers University Press:New Brunswich, NJ.

FAUSLO-STERLING ANNE. (1985). Myths of Gender. Basic Books: New York.

FRANCIS, MARK. (1988). "Changing Values for Public Landscapes." Landscape Architecture. 78/1 54-59.

__________. (1987). "Some Different Meanings Attached to a City Park and Community Garden." Landscape Journal. 6/2 101-111.

FREEMAN, JO ed. (1979). Women: A Feminist Perspective. 2nd ed. Mayfield Pub. Co.: Palo Alto, CA.

FRYER, JUDITH. (1986). Felicitous Space. University of North Carolina Press: Chapel Hill.

GAY, L.R. (1981). Educational Research. 2nd. ed. Merrill Pub.: Columbus

GUILFORD, J.P. and FRUCHTER, BENJAMIN. (1978). Fundamental Statistics in Psychology and Education. McGraw Hill: New York.

GILLIGAN, CAROL. (1982). In a Different Voice: Psychological Theory and Women's Development. Harvard University Press: Cambridge, MS.

HALL, EDWARD, T. (1966). The Hidden Dimension. Doubleday: Garden City.

HARRIS, HOWARD and LIPMAN, ALAN. (1984). "Social Process, Space Usage: Reflections on Socialisation in Homes for Children." British Journal of Social Work. 14/ 49-65.

HOLAHAN, CHARLES J. (1982). Environmental Psychology. Random House: New York.

__________. (1978) "Sex Differences in Schematizing the Behavioral Environment." IN: Environment and Behavior: A Dynamic Perspective. Holahan, Charles J. Plenum Press: New York.

HUNTER COLLEGE WOMEN'S STUDIES COLLECTIVE. (1983). Women's Realities, Women's Choices. Oxford University Press: Cambridge, MS.

ITTLESON, WILLIAM H. (1973). "Environmental Perception and Contemporary Perceptual Theory." IN: Environment and Cognition. Ittelson, William H. ed. Harcourt Brace Jovanovich: New York.

ITTELSON, W.H.; FRANCK, K.A., and O'HANLON, T.J. (1976). "The Nature of Environmental Experience." IN: Experiencing the Environment. Wapner, S.; Cohen, S.B. and Kaplan, R. Plenum: New York.

JACKSON, J.B. (1986). "The Vernacular Landscape." IN: Landscape Meanings and Values. Landscape Research Group Ltd. Allen & Unwin: Winchester, MS.

JACQUES, D.L. (1975). "Landscape Appraisal: The Case for a Subjective Theory." IN: Landscape Assessment: Values, Perceptions and Resources. Zube et al. eds. Dowden, Hutchinson & Ross, Inc.: Stroudsburg, PA.

KAPLAN, RACHEL. (1975). "Some Methods and Strategies in the Prediction of Preference." IN: Landscape Assessment: Values, Perceptions and Resources. Zube, Ervin et al. eds. Dowden, Hutchinson & Ross, Inc.: Stroudsburg, PA.

KAPLAN, STEPHEN. (1983). "A Model of Person-Environment Compatability." Environment and Behavior. 15/3 311 -332.

KAPLAN, STEPHEN and KAPLAN, RACHEL. (1982). Cognition and Environment: Functioning in an Uncertain World. Praeger: New York.

__________. (1978). Humanscape: Environments for People. Wadsworth Pub. Co.: Belmont, CA.

KELLER, SUZANNE ed. (1981). Building For Women. Lexington Books: Lexington, MS.

KENNEDY, MARGRIT. (1981a). "Seven Hypotheses on Female and Male Principles in Architecture." Heresies 11/ 12-13.

__________. (1981b). "Toward a Rediscovery of Sex Differences in Architecture and Planning." Women's Studies International Quarterly. 4/1 75-81.

KNAPP, MARK L. (1978). Nonverbal Communication in Human Interaction 2nd ed. Holt, Rinehold & Winston: New York.

LANE, KENNETH F. (1986). "A Simple Method of Identifying and Evaluating Wildlife Habitat Based on Vegetative Form", paper presented at Council of Educators in Landscape Architecture Conference. Los Angles:p.1.

LANG, JON. (1987). Creating Architectural Theory: The Role of the Behavioral Sciences in Environmental Design. Van Nostrand Reinhold: New York.

LAURIE, IAN C. (1975). "Aesthetic Factors in Visual Evaluation." IN: Landscape Assessment: Values, Perceptions and Resources. Zube, Erwin et al. eds. Dowden, Hutchinson & Ross, Inc.: Straudsburg, PA.

LAURIE, MICHAL. (1975). Landscape Architecture. Elsevier N. Holland Inc.: New York.

LEACH, BELINDA; LESIUK, ELLEN, and MORTON, PENNY E. (1986). "Perceptions of Fear in the Urban Environment." Women and Environments. Spring/ 10-12.

LEVY-LEBOYER, CLAUDE. (1982). Psychology and Environment. Canter, David and Griffiths, Ian trans. Sage Pub.: Beverly Hills.

LIPPARD, LUCY R. (1977). "Centers and Fragments: Women's Spaces." IN: Women in American Architecture: A Historic and Contemporary Perspective. Torre, Susana ed. Whitney Library of Design: New York.

LIPS, HILARY M. and COLWILL, NINA LEE. (1978). The Psychology of Sex Differences. Prentice-Hall: Englewood Cliffs, New Jersey.

LOWENTHAL, DAVID. (1972). "Methodological Problems in Environmental Perception and Behavior Research." IN: Edra Three: Environmental Design, Research and Practice. Mitchel, J. ed. University of California: Los Angeles, CA.

LOYD, BONNIE. (1975). "Woman's Place, Man's Place." Landscape. 20/1 10-13.

LYLE, JOHN. (1989). "L.A. Forum." Landscape Architecture. March/ 57.

LYNCH, KEVIN. (1981). **Good City Form.** MIT Press: Cambridge, MS.

__________. (1960). The Image of the City. M.I.T. Press: Cambridge, MS.

LYNCH, KEVIN and HACK, GARY. (1985). Site Planning. 3rd. ed. M.I.T. Press: Cambridge, MS.

LYONS, ELIZABETH. (1983). "Demographic Correlates of Landscape Preference." Environment and Behavior. 15/4 487-511.

MACIA, A. (1979). "Visual Perception of Landscape: Sex and Personality Difference." IN: Our National Landscape. Elsner,G.H. and Smandon, R.C. eds. Government Technical Report PSW-35. USDA Forest Service: Berkeley, CA.

MAZEY, MARY ELLEN and LEE, DAVID R. (1983). Her Space, Her Place. Commercial Printing: State College, PA.

MEHRABIAN, ALBERT. (1981). Silent Messages: Implicit Communication of Emotions and Attitudes. 2nd ed. Wadsworth: Belmont, CA.

__________. (1976). Public Places and Private Spaces. Basic Books Inc.: New York.

MEINING, E.W. ED. (1979). The Interpretation of Ordinary Landscapes. Oxford University Press: New York.

MERRIAM-WEBSTER, (1976). Webster's Collegiate Thesaurus. G&C Merriam Co. Pub.: Springfield, Massachusetts.

MILLER, IRIS. (1981). "Space and Values: Urbanism and Gardens." IN: Building For Women. Keller, suzanne ed. Lexingto Books: Lexington, MS.

MILLMAN, MARCIA and KANTER, ROSABETH MOSS eds. (1975). Another Voice: Feminist Perspectives on Social Life and Social Science. Anchor Press: Garden City, NY.

NASAR, JACK; JULIAN, DAVID; BUCHMAN, SARAH; HUMPHREYS, DAVID and MROHALY, MARIANNE. (1983). "The Emotional Quality of Scenes and Observation Points: A Look at Prospect and Refuge." Landscape Planning. 10/ 355-361.

NORBERG-SCHULTZ, CHRISTIAN. (1980). Genius Loci: Towards a Phenomenology of Architecture. Rizzoli: New York.

NORDSTROM, MARIA. (1985). "Sex Differences and the Experience of the Physical Environment." IN: Women's Worlds. Safir, Marilyn et al. eds. Praeger: New York.

NOROSIS, MARIJA J. (1983). SPSS-X Introductory Statistical Guide. SPSS Inc.: Chicago, IL.

NOWLIS, R.B. "Research with the Mood Adjective Checklist." IN: Affect, Cognition and Personality. Tomkins, S.S. and Izards, C.E. eds. Springer: New York.

PENNING-ROWSELL, EDMUND C. and LOWENTHAL, DAVID eds. (1986). Landscape Meanings and Values. Allen & Unwin: Winchester, MS.

PENROSE, JAN. (1987). "Women and Man-Made Environment: The Dutch Experience." Women and Environments. Winter/ 12+.

PETERSON, REBECCA. (1986). "Ten Active Years: A Review of Women and Environments Research." Women and Environments. Fall/ 9-11.

PETERSON, REBECCA; WEKERLE, GERDA R. and MORLEY, DAVID. (1978). "Women and Environments: An overview of an Emerging Field." Environment and Behavior. 10/4 511-534.

PROSHANSKY, H.; FABIAN, A.; and KAMINOFF, R. (1983). "Place-Identity: Physical World Socialization of the Self." Journal of Environmental Psychology. 3/ 57-83.

PROSHANSKY, H.; ITTLESON, W. and RIVLIN L. eds. (1976). Environmental Psychology: People and Their Physical Settings. 2nd ed. Holt, Rinehart & Winston: New York.

RELPH, E. (1976). Place and Placelessness. Pion Ltd.: London.

REIGNER, VICTOR A. (1978). "Comparison of Perceived and Objective Crime Against Elderly in an Urban Neighborhood." Paper Presented at the 31st Annual Meeting of the Gerontological Society. Dallas.

ROHRLICH, RUBY and BARUCH, ELAINE HOFFMAN eds. (1984). Women in Search of Utopia: Mavericks and Mythmakers. Schocken Books, New York.

RUSS, JOANNA. (1975). The Female Man. Bantam Books: New York.

RUSSELL, JAMES A. and LANIUS, ULRICH F. (1984). "Adaptation Level and the Affective Appraisal of Environments." Journal of Environmental Psychology. 4/ 119-135.

RUSSELL, JAMES A. and MEHRABIAN, ALBERT. (1978). "Approach-avoidance and Affiliation as functions of the Emotion-eliciting Quality of an Environment." Environment and Behavior. 10/ 355-387.

RUSSELL, JAMES A. and PRATT, GERALDINE. (1980). "A Description of the Affective Quality Attributed to Environments." Journal of Personality and Social Psychology. 38/2 311-322.

RUSSELL, JAMES A. and SNODGRASS, JACALYN. (1987). "Emotion and the Environment." IN: Handbook of Environmental Psychology. Stokols, Daniel and Altman, Irwin eds. John Wiley & Sons: New York.

RUSSELL, JAMES A., WARD, LAWRENCE M. and PRATT, GERALDINE. (1981). "Affective Quality Attributed to Environments." Environment and Behavior. 13/3 259-288.

SPSS-X INC. (1988). SPSS-X User's Guide. 3rd. ed. SPSS Inc.: Chicago, IL.

SAEGERT, SUSAN. (1980). "Masculine Cities and Feminine Suburbs: Polarized Ideas, Contradictory Realities." Signs. 5/3S s96-s111.

SAFIR, MARILY ed. (1985). Women's Worlds. Praeger: New York.

SARBIN, THEODORE R. "Place Identity as a Component of Self: An Addendum." Journal of Environmental Psychology. 3/ 337-342.

SELL, JAMES L.; TAYLOR, JONATHAN G. and ZUBE, ERVIN H. (1984). "Toward a Theoretical Framework for Landscape Perception." IN: Environmental Perception and Behavior: An Inventory and Prospect. Research Paper No. 209. Saarinen, Thomas F.; Seamon, David and Sell, James L. eds. Depart. of Geography: Chicago.

SHUTTLEWORTH, STEVEN. (1980). "The use of Photographs as an Environmental Presentation Medium in Landscape Studies." Journal of Environmental Management. 11/ 61-76.

SIME, JONATHAN D. (1986). "Creating Places or Designing Spaces?" Journal of Environmental Psychology. 6/1 49-63.

SIMOS, MIRIAM (Starhawk, pseud.). (1987). Truth or Dare: Encounters with Power, Authority and Mystery. Harper and Row: San Francisco.

__________. (1982). Dreaming the Dark: Magic, Sex and Politics. Beacon Press: Boston.

SPRETNAK, CHARLENE ed. (1982). The Politics of Women's Spirituality. Anchor Press: Garden City.

STARRETT, BARBARA. (1982). "The Metaphors of Power." In: The Politics of Women's Spirituality. Spretnak, ed. Anchor Press: Garden City.

STILGOE, JOHN R. (1982). Common Landscape of America, 1580 - 1845. Yale Univ. Press: New Haven.

STOKOLS, DANIAL and ALTMAN, IRWIN eds. (1987). Handbook of Environmental Psychology. John Wiley & Sons: New York.

STOKOLS, DANIEL and SHUMAKER, SALLY ANN. (1981). "People in Places: a Transactional View of Settings." IN: Cognition, Social Behavior, and the Environment. Harvey, John H. ed. Lawrence Erlbaun Assoc.: Hillsdale, NJ.

TAVRIS, CAROL and OFFIR, CAROLE. (1977). The Longest War: Sex Differences in Perspective. Harcourt Brace Jovanovich, Inc.: New York.

TAYLOR, JONATHAN G.; ZUBE, ERVIN H. and SELL, JAMES L. (1987). "Landscape Assessment and Perception Research Methods." IN: Methods in Environmental and Behavioral Research. Bechtel et al. eds. Van Norstrand Reinhold Co.: New York.

TORRE, SUSANA ed. (1977). Women in American Architecture: A Historic and Contemporary Perspective. Whitney Library of Design: New York.

TUAN, YI-FU. (1977). Space and Place: The Perspective of Experience. University of Minnesota Press: Minneapolis.

__________. (1974a). Topophilia: A Study of Environmental Perception, Attitudes and Values. Prentice-Hall: Englewood Cliffs, NJ.

__________. (1974b). "Space and Place: Humanistic Perspective." IN: Progress in Geography. vol. 6. Edward Arnold: London.

ULRICH, ROGER S. (1979). "Visual Landscapes and Psychological Well-Being." Landscape Research. 4/ 17-23.

UNITED STATE FOREST SERVICE. (1973). National Forest Landscape Management. 1/434.

WARD, SHAWN L.; NEWCOMBE, NORA and OVERTON, WILLIS F. (1986). "Turn Left at the Church, or Three Miles North: A Study of Direction Giving and Sex Differences." Environment and Behavior. 18/2 487-511.

WEILER, KATHLEEN. (1988). Women Teaching for Change: Gender, Class and Power. Bergin & Garvey Pub.: South Hadley, MS.

WEISMAN, LESLIE KANES. (1981). "Women's Rights: A Manifesto." Heresies. 11/ 6-8.

WEKERLE, GERDA R.; PETERSON, REBECCA and MORLEY, DAVID eds. (1980). New Space For Women. Westview Press: Boulder, CA.

WHITE, WILLIAM. (1980). The Social Life of Small Urban Spaces. The Conservation Foundation: Washington D.C.

WOHLWILL, J.F. (1976). "Environmental Aesthetics as a Source of Affect." IN: Human Behavior and Environment: Advances in Theory and Research. Altman, I. & Wohlwill, J.F. eds. Plenum: New York.

ZAJONE, R.B. (1984). "On the Primacy of Affect." American Psychologist. 39/ 117-123.

__________. (1980). "Feeling and Thinking: Preferences Need no Inferences." **American Psychologist.** 35/ 151-175.

ZEISEL, JOHN. (1986). Inquiry by Design. Cambridge Press: New York.

ZUBE, ERVIN H. (1976). "Perception of Landscape and Land Use." IN: Human Behavior and Environment: Advances in Theory and Research. Altman, I. & Wohlwill, J.F. eds. Plenum: New York.

__________. (1974). "Themes in Landscape Assessment Theory." Landscape Journal. 3/2 104-109.

ZUBE, ERVIN H.; BRUSH, ROBERT and FABOS GY eds. (1975). *Landscape Assessment: Values, Perceptions and Resources*. Dowden, Hutchinson & Ross, Inc.: Stroudsburg, PA.

ZUBE, ERVIN H.; SELL, JAMES L. and TAYLOR, JONATHAN G. (1982). "Landscape Perception: Research, Application and Theory." *Landscape Planning*. 9/ 1-33.

GENDER DIFFERENCES IN PERCEPTION OF SENSE OF PLACE IN THE PUBLIC LANDSCAPE

by

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ABSTRACT

The focus of this study is whether or not gender, a culturally and socially defined phenomenon, influences people's perceptions of sense of place in public parklands. The definition for sense of place was derived by scouring the literature for common elements or concepts. Sense of place was broken down into the components of identification, memorability, compatibility and personal affect. The aspect of safety, defined as freedom from the threat of harm, was not found in the male dominated literature but was included in this study as a potentially important facet of perceptions of sense of place.

Gender differences in perception were examined as they relate to each of the components listed above. A survey of one hundred and sixty undergraduates showed that sense of place, as defined in this study, is perceived differently by female and male groups. This study suggests that women and men perceive and evaluate space differently and therefore can be considered to be two different user groups. A beginning step towards building an environment which supports women's lives, and development of sense of place, is to acknowledge women's experiences as different from that of men's.